FREE

CANADA'S COMPUTER INFORMATION SOURCE

THE COMPUTER PAPER

REVIEWS FEATURES

ONTARIO (GREATER TORONTO) EDITION DECEMBER 1994 VOLUME 7 NO. 12

Computer Gift Guide

NEW Pentium Powered Portables

Canadian PAYROLL SURVEY

CD-ROMs for Kids

Mac SECRETS

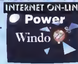
Browse the World Wide Web with MOSAIC

Expanded Coverage!
- Macintosh
- Multimedia
- Online
- Learning

An Entirely Windows Driven BBS

Call For Free Demo
BBS (416) 969-8269 or
BBS (905) 508-8872

Simple to use–
16-28.8 Lines,
Multi-User Chat
Satellite Feeds,
12 CD-ROM Drives



NEW

We can back up your hard disk onto a CD-ROM for you!!!

$99.95

Arctic Adventure	$39.95
Bio Menace	44.95
Blake Stone	69.95
Commander Keen Goodbye Galaxy	44.95
Commander Keen Vorticons	44.95
Cosmo's Cosmic Adventures	44.95
Crystal Caves	39.95
Dark Ages	39.95
Duke Nukem	39.95
Duke Nukem II	44.95
Halloween Harry	44.95

Hocus Pocus	34.95
Major Stryker	39.95
Math Rescue	39.95
Monster Bash	44.95
Mystic Towers	39.95
Paganitzu	44.95
Pharaoh's Tomb	39.95
Raptor	44.95
Secret Agent	39.95
The Kroz Series	39.95
The Monuments of Mars	39.95
Wolfenstein 3D Episodes 1-3	44.95
Wolfenstein 3D Episodes 1-6	69.95
Wolfenstein 3D Episodes 4-6	29.95
Word Rescue	39.95

Registered Versions

Novell Authorized Reseller

Novell Personal Netware	$79
Novell netware 3.12 5 user	$899
Novell netware 3.12 10 user	$1999
Novell netware 3.12 25 user	$2899
Novell netware 4.01 5 user	$1199
MS Workgroups 3.11 Add-on	$59.95
MS Workgroups + Windows 3.11	$179
Lantastic Noderunner 2 user kit	$439
Noderunner 1 user add-on	$139

BNC connector or rg58	$1.95
BNC connector or rg62	$1.95
Terminators 50 ohm	$3.95
T-Connectors	$4.95
Couplers	$4.95
Network Cable RG45/rg58/rg62	$.40/ft
8 bit Ethernet card	$89
16 bit Ethernet card	$119
32 bit Ethernet card	$479
8 bit Arcnet card	$85
16 bit Arcnet card	$139
Arcnet 4p passive hub	$29
Arcnet 8p active hub	$249

COMPAQ

Compaq Contura Aero 425 4/170	$1,799
Compaq Contura Aero 433 4/170	$2,499
Compaq Presario 460 4/270 14" Monitor	$1,799
Compaq Presario 510 CDS 4/270 14" Monitor	$2,099
Compaq Presario 720 CDS 4/420	$2,099
Compaq Presario 724 CDS 8/420	$2,399
Compaq Presario 920 CDS 8/420	$2,199
Compaq Presario 924 CDS 8/525	$2,599

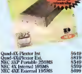
Please call for leasing information.

SPECIALS

CD Audio Cables -All popular makes and models	$14.95
CD Caddies	$5
CD Jewel Cases	$.50ea.
Lotus Approach V2.1/WIN	$99
NHL Hockey '95 CD	$49
PGA Tour Golf 486 CD	$69
Publish It! 3.1/WIN	$29
Virus Doctor	$4.99

Upgrades, Repairs, and On-site installations available

CMSI - SPECIALIZING IN CD-ROMS!



Quad-4X-Plextor Int	$649
Quad-4X-Plextor Ext.	$819
NEC 3XP Portable 250MS	$549
NEC 4X Internal 195MS	$599
NEC 4XE External 195MS	$699

Armoured Fist	$69
Arthur's Teacher Trouble	$23
Astrology Source	$19
Better Homes Gardening	$29
Better Homes Cooking	$29
Carmen San Diego Deluxe	$27
Chessmaster 4000 Turbo	$24
Comptons Interactive 1994	$39
Critical Path	$28
Day of the Tentacle	$29
Dinosaur/Space Adventure	$29
Family Doctor 3rd Edition	$23
Gabriel Knight	$27
Global Explorer	$99
Grolier's Encyclopedia/Win. V. 6.0	$29
Ham Radio QRZ!	$19
Hobbes OS/2 Ready to Run	$39
Iron Helix	$27

INCA	$29
Indiana Jones	$29
Journey To The Planets	$19
Just Grandma and Me	$23
Kid's Zoo/Undersea Adv.	$29
King James Bible	$27
King's Quest 6	$22
Kodak Photo CD Access	$17
Libris Britannia	$49
Linux Plug N' Play	$39
Linux Toolkit	$29
Mad Dog McCree	$34
Mayo Clinic	$23
Megarace	$24
Microsoft Beethoven	$69
Microsoft Golf	$38
Microsoft Encarta '95	$119
Microsoft Musical Instruments	$69

Microsoft Cinemania	$59
Myst	$64
Night Owl 13	$39
OS/2 Warp V3.0	$99
Outpost	$34
Panasonic 562 ROM Drive	$179
Quantum Gate	$30
Rebel Assault	$59
Sam & Max CD	$59
Scientific Library	$39
Star Crusader	$39
Starwars Chess	$19
SimCity 2000 CD	$39
Simtel 2Disc Set	$29
TFX	$37
Under A Killing Moon	$69
3D Dinousaur Adventure	$28
7th Guest	$27

CONTROLLERS

Super I/O Card	$24
Super I/O W/16550	$79
VESA IDE w/2S,1P/1G	$39
VLB I/O 2S,1P/1G 4IDE	$49
Adaptec 1505	$79
Adaptec 1522 kit	$199
Adaptec 1542CF kit ISA	$349
Adaptec 2742AT EISA	$399
Adaptec 2842VLB	$349
Adaptec 2940W PCI SCSI-3	$499

FAX/MODEMS

Supra 14.4 INT	$179
Supra 14.4 EXT	$199
USR 28.8 INT	$299
USR 28.8 EXT	$319
USR14.4 INT	$149
USR14.4 EXT	$179

HARD DRIVES

420 MB	$269
540 MB	$299
730 MB	$499
1.08 Quantum SCSI	$849
2.1 Quantum SCSI	$1,549

SCANNERS

Logitech 32 w/OCR	$179
Logitech 256 w/OCR	$189/$219
Logitech Color/OCR	$379/399
Logitech EZ Touch w/OCR	$289
Logitech Scanman Powerpage	$549

VIDEO CARDS

Mono	$19
1 MB SVGA	$89
ATI Pro Turbo 2MB VLB/PCI	$449
ATI Pro Turbo 4MB VLB/PCI	$749
ATI Graphics Xpression VLB/PCI/ISA	$299

TAPE

120 MB Int.	$99
250 MB Int.	$179
Jumbo 350MB Int.	$249
Trakker 350MB Ext.	$499
Trakker 250 Ext.	$399

MONITORS

14' VGA	$259
14' SVGA inter MPRII	$299
14' SVGA non-int MPRII	$369
17' SVGA non int.	$1,129

MOTHERBOARDS

386SX-40	$99
386DX-40	$129
486DX-40	$349
486DX2-66 AMD/INTEL	$439/499
486 DX2-80 AMD	$529
486DX4/100	$899
PENTIUM 60	$1,099
PENTIUM 90	$1,499

NEC MONITORS

XE15	$779
XP15	$949
XE17	$1,449
XE17	$1,799

HEWLETT PACKARD

HP 560C	$Call
HP 4P	$Call
HP 4	$Call
HP Scanner IICX	$1,299
HP IIP Scanner	$699

INKJETS & LASER PRINTERS

Lexmark IBM 4039-10Rx	$1,899
Lexmark OPTRA R 1200DPI	$2,699
Lexmark OPTRA RX 1200DPI	$3,199
Lexmark IBM 4039-16L+	$3,799
Lexmark Winwriter 600	$1,599
Epson Stylus 800+	$299
Epson Stylus Colour	$779
Epson Stylus 1000	$649
Epson Action Laser 1500	$849
Epson Action Laser 1600	$1,379

PANASONIC

2023 24 pin mono	$229
2123 24 pin colour upgradeable	$289
2134 24 pin colour	$329
2624 24 pin wide carr	$489
4400 LED	$649

SOUND CARDS

Gravis Ultrasound	$149
Gravis Ultrasound Max	$249
Logitech Soundman Wave	$249
Sound Blaster AWE32	$379
Sound Blaster Pro Deluxe	$99
Sound Blaster 16 Value	$119
Sound Blaster 16 MCD/ASP	$179/$229
Sound Blaster 16 SCSI 2/ASP	$229/$259
Turtle Beach Maui	$219
Turtle Beach Rio	$195
Turtle Beach Monterey	$489
Turtle Beach Tahiti	$379
Turtle Beach Tropez	$329
Discovery CD 16	$324

REMOVABLE DRIVES

Internal 105MB IDE w/Cart	$319
Internal 105MB SCSI No Cart	$319
Internal 200MB SCSI No Cart	$549
Internal 270MB IDE/SCSI No Cart	$599
External 44Mb w/Cart	$529
External 88Mb w/Cart	$649
44MB Cartridge	$89.95
88MB Cartridge	$129.95
105MB Cartridge	$79.95
200 MB Cartridge	$159.95
270 MB Cartridge	$119.95

CMSI

404 Steeles Avenue West, Unit 5
Thornhill, Ontario L4J 6X3
Phone: (905) 889-1616
Toronto Line (416) 409-6910
Fax: (905) 889-1199

All Pricing is already cash discounted • Some quantities may be limited

Monday:	9 am – 9 pm
Tuesday:	9 am – 9 pm
Wednesday:	9 am – 9 pm
Thursday:	9 am – 9 pm
Friday:	9 am – 9 pm
Saturday:	9 am – 6 pm
Sunday:	12 pm – 5pm

TAKE YOUR PICK...FREE!

To introduce you to Corel Professional Photos on CD-ROM, choose a free CD-ROM from the collection shown here (valued at $29.95 Cdn.) Each CD-ROM features 100 high-resolution royalty free photos.

COREL PROFESSIONAL PHOTOS
CD-ROM

★ **OFFER RESTRICTIONS:**
- This offer expires December 31, 1994
- All customers must pay a $9.99 Cdn shipping and handling charge.
- This offer is available only direct from Corel Corporation
- All offers are sent by regular mail, no courier orders can be accepted. As this offer is being sent by mail, Corel will not assume responsibility for any lost, damaged or misdirected orders.
- Corel reserves the right to limit this offer to any customer based on the prospect of misuse or misrepresentation

Backyard Wildlife
Flowering Potted Plants
Cycles & Carousels
Austria
North American Wildflowers
[illegible]
Germany
African Speciality Animals
English Country Gardens
Annuals for American Gardens
Perennials in Bloom
Cheetahs, Leopards & Jaguars
Bald Eagles
Cougars
Textures
Canada's East Coast
The Galapagos
Holland
Animals of the Galapagos
Peru
Images of Death Valley
California Coasts
Birds
Mexico
Images of Thailand
New York City
Rome
Autumn
Wheels
[illegible]

[illegible] Canada
Crosses
Canoeing & Kayaking
Meals & Dining
Grapes & Wine
Mushrooms
Wildlife Babies
Endangered Species
Land of the Pyramids
Grand Canyon
Hunting Birds
Ocean Life
Royal Military Parades
Images of Turkey
Yosemite
Wild Sheep & Goats
Vegetables
Sunrises
Ice & Frost
[illegible]
Alaskan Wildlife
Rural Africa
Snakes, Lizards & Salamanders
Landscapes
Images of the Grand Canyon
Nature Scenes
Helicopters
Victory Vehicles
Models
White Sands
[illegible] Roses

Ice & Fishing
Fishing
Creative Crystals
Angel
Classic Automobiles
Indigenous Peoples
Interior Design
Clouds
Textile Patterns
Textures/Backgrounds
Caves
Hunting
Sands & Sailboats
Horses
Beautiful Women
Jamaica
Sweden
Virgin Islands
Paris
The Alps in Spring
Fungi
Fish
Tropical Sea Life
Old Buildings
Chicago
Gardens of Europe
Asia
Cactus
Cowboys
Flowers Close-Up
Portrait of Bees

Summer Sports
Canada
Bali
Quebec
Sailboats
Decorated Pumpkins
The Netherlands
Spring
Cityscapes
Canoeing Adventure
People of the World
Arthropods
Lake District, England
Winter
Acadian Nova Scotia
New York, New York
Military Aircraft
Bhutan
Dogs
[illegible]
Sunset Japan
Industry & Transportation
Canadian Farming
Reflections
Kenya
Utah, Color Country
Colorado Plateau
Tulips
Middle East
Antique Postcards
Mexican Holiday

Washington State
Studio Models
Exotic Hong Kong
Mardi Gras
Florence
Space Scenes
Winter Sports
Fire Fighting
Jersey Channel Islands
Night Scenes
World Landmarks
[illegible]
Devon, England
Landscapes of the World
Showers
English Countryside
Sailing
International Fireworks
Under the Red Sea
Underwater Photography
Waves
Beijing
Foliage Backgrounds
Lost Civilizations
Fruits & Nuts
Jamaica
Lost Tribes
Bridges
Cuba
Cats & Kittens
Sampler 3

CAN 0024

***Call today!* 1-800-394-3729** ext. 221

COREL

Our new Venturis
is so easy *to* set up,

# people *are* asking
if we also make
a VCR.

INTRODUCING
THE DIGITAL VENTURIS

With the new Digital Venturis™ line you'll have your favorite programs on the screen in record time. Everything about Venturis is designed for easy setup, starting with a box that tells you how to unpack it. Then Venturis walks you through its icon-based startup screens, and even lets you get inside its easy-access enclosure without tools. Offering power up to a 60MHz Pentium™ chip and a three-year comprehensive warranty, Venturis is the ideal solutions for general business users. Best of all, it never flashes "12:00" at you.

Call 1-800-DIGITAL for your nearest reseller. Please reference Ad# 002 when you call, 8:00 am - 5:00 pm, ET, Mon-Fri.

digital™
PC

Built in Canada

[illegible]

CONTENTS

CHRISTMAS

18 PC Stocking Stuffers for Nearly Everyone
by Martin P Waterman

FEATURES

CHRISTMAS

24 **A Christmas Platter: CD-ROM Gifts**
by Ross MacDonald

36 **Christmas Gift Wrap Up of Gaming Software & Peripherals**
by Gord Goble

44 **Learning & Having Fun: Guide to Children's Software**
by Pedro Arrais

50 **Be Original This Christmas: Try Computer Books**
by Ross MacDonald

PORTABLES

53 **HP's Bigger OmniBook**
by Geof Wheelwright

57 **Low voltage Pentium Coming to Notebook PC's**
by Geof Wheelwright

58 **PCMCIA Moving to Desktop**
by Geof Wheelwright

PAYROLL SOFTWARE SURVEY

96 **Annual Survey of Canadian Payroll Software**
by Joan Homal

100 **Canadian Payroll Software Basics**

NEWS & REVIEWS

INDUSTRY

16 **Let the Chips Fall Where They May**
by Geof Wheelwright

17 **Beyond Windows 95**
by Geof Wheelwright

HARDWARE SOFTWARE

61 **Utilities to Ease Windows**
by Geof Wheelwright

99 **Estate Software:** A Test of Wills
by Rod Lamirand

MULTIMEDIA

66 **Digital Photography Almost Affordable**
by Geof Wheelwright

68 **Amnesty International**
Interactive Human Rights CD
by Nick Anis

76 **Review: How Multimedia Computers Work**
by Ross MacDonald

83 **Visual Effects by the Numbers**
by Frank Garcia

MAC SECTION

78 **Top Utilities for Mac**
by Graeme Bennett

79 **Foldermenu Improves Now Utilities 5.0**
by Graeme Bennett

79 **Book Review: *Mac and Power Mac Secrets***
by Graeme Bennett

80 **Beauty in the Beast**
Review: Word 6.0 for Mac
by Graeme Bennett

81 **Beam Up QuickTime VR**
by Richard C S 'Doc' Kinne

ONLINE

87 **Commtalk: Cashless in Toronto**
by James MacFarlane

90 **Librarians Surf Cyberspace**
by Jean Read

91 **Shaping Cyberspace into Human Space**
by Barry Shell

93 **Book Review: Software Included in Mosaic Handbook**
by Keith Schengili-Roberts

94 **Training for Internet Newbies**
by Carolyn L. Burke

BOOK & GAME REVIEWS

102 **Top 10 Computer Books of '94**
by Keith Schengili Roberts

109 **Game Review: Treasure Galaxy**
Math Adventure Delivers Cool Lessons
by Rod Lamirand

SPECIAL

106 **Canadians on Computers**
by John Robert Colombo

LEARNING

116 **Compound Documents Through OLE**
by Geof Wheelwright

DEPARTMENTS

6 Mailbox
8 Letter from the Editor
18 Newsbytes
116 Learning
111 What's New
119 Classifieds
121 Calendar of Events
121 User Groups
122 Computer Directory
124 Index of Advertisers

COMING UP IN ONTARIO EDITION

JANUARY 1995
Entry Level Systems, At Home Work

Classifieds	Mon., Nov 28
Ad deadline	Wed., Nov 30
Camera Ready	Thur., Dec. 1
Distribution	Fri., Dec. 16

FEBRUARY 1995
Ink Jet Printers, DTP & Graphics

Classifieds	Mon., Jan 2
Ad deadline	Wed., Jan 4
Camera Ready	Thur., Jan 5
Distribution	Fri., Jan 20

MARCH 1995
Modems Equipping the Outbound Worker

Classifieds	Mon., Jan. 30
Ad deadline	Wed., Feb 1
Camera Ready	Thur., Feb 2
Distribution	Fri., Feb. 17

Call Now
(416) 588-1580
for advertising information

Advertise in the new
Eastern Edition of
The Computer Paper
Toronto (416) 588-1580
Halifax (902) 457-4390
Montreal (514) 843-4270
Ottawa (613) 789-6431
Quebec/Atlantic 1 800 465 3517

Mailbox

Lost in Space?

Two issues ago there was an insert from IBM offering a free CD of the new version of OS/2. I filled out the accompanying return postcard in order to get a copy of this disk.

I wanted to let you know that IBM has not mailed me a disk. I don't hold *The Computer Paper* responsible for that, but I thought that you should know that a company that purchased advertising space in your paper did not honor an offer that was made in that advertising.

Randy Trinkle
Vancouver BC

DA replies. I called Harvey Lewi, the person at IBM in charge of this promotion. He said that this had been one of the most successful promotions IBM Canada had ever run and that they had received over 60 000 responses to that flyer in The Computer Paper. *He checked the database and said that your name was there but that it may have only been recently sent out. You should have your copy by the time this letter is published.*

Evil Shows Affection

Hello. I am the Evilhacker of 905 (Mississauga). I would like to commend your work. You have put together the best computer magazine that I read. Tips on software and hardware are very informative, especially the NewsBits section. What would be good is a game review that is a bit more detailed. Many of my friends look for that. Also a larger BBS list would be nice but other than that your magazine is AMAZING!!! I once again would like to say that many appreciate your work greatly.

See ya. [~100% EVILHACKED~]

The Evilhacker,
evilhacker@sb tor250 org

DA Replies: Dear Evil, With a name like yours, I am really glad you like the paper. More games reviews and BBS lists coming up. Look for a great overview in this issue on games and multimedia items. Full BBS lists will be run twice a year.

Rule the Earth? Give us an Eon

It's nice to see someone discuss the relative existence of mankind on the face of the earth (Letter from the Editor, Oct '94). Dinosaurs had brains the size of peanuts and lasted for tens of millions of years. Modern man on the other hand, has been around for about 10 000 years and our forefathers reach back a couple of million years. We have a long way to go before we can call ourselves rulers of the earth.

Excellent comments on the Tyrell museum. Comparison of the physical experience to an electronic experience provided great insight.

Great Magazine! When I'm looking for computer info, your magazine is the one I turn to.

Ken Marcinyshyn, via Internet

Education vs Job Training

(Sigh) Well, it certainly is the '90s. (Shrugs) Your whole editorial (admittedly, with a few disclaimers) seemed to be saying that the main goal of a university education should be to prepare oneself for the business world.

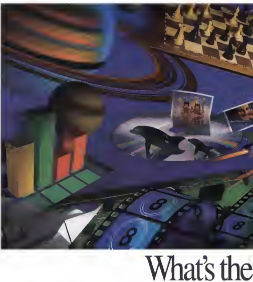
This viewpoint is becoming more and more prevalent. It envisages "factory type" universities churning out products (ie students fully prepared for the business world). I, however, don't agree with this viewpoint and never will. Universities do *not* exist for the benefit of business. Universities are for individual development, whatever form that development may take (which, in the long run, is entirely up to the individual).

I am fully aware that many students only attend university to prepare themselves for business. And indeed universities have programs to meet that need. Once again, though, this goal is up to the individual and is only appropriate *for those individuals who have that goal.*

University was much more for me. It helped me develop in ways that I know I would have been incapable of developing had I not gone.

You ended your editorial with "The days when our society and young people could afford the luxury of spending years getting a 'higher education' seem to be ending." You

▶



What's the

PC software is really going places. And it's going to one place in particular. To PCs with the Intel Pentium™ processor inside. The fact is, all PC software runs better on a Pentium processor-based PC. But the more incredible the software, the more it demands Pentium processor performance.

The Intel iCOMP™ Index of Relative Processor Performance*
Processor
0
100
200
300
400
500
600
700
800
900
Pentium™ (100 MHz)
Pentium (90 MHz)
Pentium (66 MHz)
Pentium (60 MHz)
The Pentium processor tops the chart, showing the highest performance for all PC software.

©1994 Intel Corporation. *Source: iCOMP® A Simplified Measure of Relative Intel Microprocessor Performance, Intel Corp., 1992.

Mailbox

know you might be right But with all my heart I hope not The philosophical implications of this happening are staggering Just think about it for a moment in an increasingly materialistic and superficial world, is this what you really want?

Jack Petrilli via Internet

P S As to our young man you may have missed an opportunity here You were worried about his lack of writing samples and lack of desktop publishing experience. On a mundane level the young man was able to complete his Masters. This means he is intelligent and will persevere to attain his goal But that is not where you missed your opportunity The young man chose to do his Masters in English Think of the perspective and depth of "human" knowledge that you have allowed to slip away

V.Fast Modems Not Expensive

I realize that due to publication lead times you cannot have the most up-to-date information in the paper However the article in the October TCP entitled "V.Fast When Fast is Not Enough" is likely to scare people off shopping for a V FC/V 34 modem when that is not necessary The article states "You can expect to pay between $550 and $1,000 for a V Fast modem. " This is simply not true I've seen a USR Sportster 28.8k fax modem in local stores for $360 (for an extra $29 you can upgrade it to v 34) and the Zoom modem using the Rockwell chipset mentioned in the article for as little as $190 V FC/V 34 modems are easily within reach of the average computer consumer.

Craig Wagner wagner@progas.com

GB Replies *Hmm Thanks for the info. Maybe he meant "including tax "*

Internet Yes!

Hello I live up in the Montreal area and since your paper was responsible in sparking my interest in Internet I took the liberty in using you as my first test letter

Thanks again for Volume 7 No 3 (March 1994) "The ABC s Of The Internet" It got me off to a good start!

Alexandre Cote,maverik@CAM ORG

No Mileage From Analogy

In your article "Upgrading Your Computer" (October 94 issue) you draw an analogy between premium software and premium petrol. ('Petrol'? It s "gasoline" in Canada) Anyways, you seldom get better mileage by using premium gasoline and it costs at least 10 percent more than regular

Maybe you do get better mileage with premium software but not always

Roger Bellows, via internet

GB replies *Point well taken, old chap We couldn't fit my Plymouth into* The Computer Paper's *labs to test, and I doubt that the diagnostic software would have run on it anyway*

Corrections

In "DTP Software The Right Tool, But For What?" (TCP Nov '94) we wrote Intergraph has introduced a Windows version of its DTP package We got the company name wrong - it should have read Interleaf, which has announced Interleaf 6 for Windows. The product should be available by the end of the year, and has a suggested price of $1,245.

Contact Interleaf Canada, 905-670-5660

A number of readers wanted to know how to contact some of the companies mentioned in our CAD review (The State of CAD In 1994 in TCP Nov '94) Most should be available locally, but the following are contacts for CAD packages that readers may find hard to locate

CadKey (CadKey)	203 298-6888
Numera (Visual CADD)	800-956-CADD or 206-622-CADD
Foresight Resources(Drafix CAD)	800-231-8574 or 816-891 1040
ASBC (DesignCAD)	918-825-7556
Xitron (XCAD)	800-617-8172
LandCadd (Site Designer)	303-799-3600

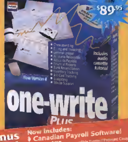
big attraction?

And there's another reason to make sure the Pentium processor is inside your next PC economics A more powerful PC lasts longer, since it will still have plenty of horsepower when tomorrow's applications come along. That, plus the fact that these PCs are now so affordable, makes today the right time to buy a Pentium processor-based PC

So look for the Intel Inside® Pentium Processor symbol on your next PC. Because nothing runs today's PC software better For more information, call 1-800-333-4161, Ext. 209

intel.

Uniquely simple... yet packed with Power!



Bonus Offer!
Now Includes:
- Canadian Payroll Software!
- Over $75 in Compatible Forms Discount Coupons

Here's what NEBS One-Write Plus Software will do for you:

- Pull down menus are grouped by easy to understand user tasks.
- Easy to use mouse lets you select any menu option or entry field quickly
- On Line help feature guides you through the program and gives you quick answers on financial topics!
- Quick set up features let you fill out and print forms and cheques quickly
- Make deposits easily! Select a bank account deposit your cheques and your balance is updated automatically!
- Powerful Supertrack™ feature lets you tailor the program to track vital business information
- Fully guaranteed! If you are not satisfied return within 180 days for your money back

Call today for your FREE demo disk!

NEBS BUSINESS FORMS LTD.
Printing and Software Solutions
330 Cranston Crescent, Midland ON L4R 4V9
Call Us Toll Free 1+800-461-7572
Toll Free Fax 1+800-461-3325

The Information Super Highway

All the talk about the coming Information Super Highway obscures the fact that to a great extent it is already here. I believe it is already here and it is the Internet. The future will only make it better with more interesting places, more e-mail addresses, more video, a billing system, more bandwidth to the home etc. The Super Highway of the future will no doubt be built by a variety of private companies and public institutions just as it is being assembled now. The Internet is already here just a little disorganized right now. It will get easier and more impressive over time.

Information Super Highway is not a bad name for this structure despite all the bad highway jokes. The metaphor can get trite fast but it does help people to visualize the idea of a need to build the infrastructure and the idea of bandwidth is well conveyed by the image of highways.

From the Editor

Internet is a hot topic. We in the media have given coverage, because many people want to know details and hard facts about how to get on the highway. There is definitely an element of fear for everyone of not wanting to get left behind. The same could be said about computers in general. I think if you did a search on the word "computer" in recent articles in newspapers and magazines you would find mention has gone up astronomically in the last five years. Fear has driven some of this growth in interest in both computers and the Internet. Interest and discovery drives another aspect. We as a culture love new things, and the Internet is a great channel for discovering the latest and greatest in almost every field.

The maturation of the Internet no doubt played a major role in keeping the concept of the Information Super Highway in the minds of the public. Things like World Wide Web and Mosaic and the widespread deployment of faster modems, the general improvement of software and hardware are the real keys to the sustained coverage. If it was just U.S. Vice President Al Gore talking about it and no reality behind it people would have quickly gotten bored and forgotten the topic. There is lots of steak behind the sizzle in this case. I don't know anyone who doesn't get excited about this stuff once they have tried it.

The Internet has evolved rapidly since it was first assembled. The Unix techies invented it in U.S. government funded research labs and used it to talk to each other over telephone lines. Then large companies saw it and started using it and then it got out to the early adopter computer users. Now it is here, relatively easy to use and available for anyone with a computer and a modem.

The excitement right now means that people are falling all over themselves trying to make money out of it. Service providers are popping up all over the country. Internet providers and publishers are showing up everywhere. These are companies that didn't exist six months ago. There will, no doubt, be casualties. Not everyone will make it. Many will survive and even flourish. It is difficult to foresee who will be the big money makers on the Internet.

Press coverage is definitely pushing things at a faster pace than before. Everyone has visions of big dollars. I think there will be a backlash just as there was with early computers that ended up in closets gathering dust and with CB radios. People realize eventually, that it is still much more fun to talk to real people in real time, than some unknown entity across the country. It will balance out. In the short run boom, in the mid term bust and in the long term a stable market. People will find out what the Internet is good for and what it is not good for.

The excitement and activity on the Internet is real, although media coverage still manages to blow it out of proportion. Ultimately people will get what they want. I don't see this as becoming like TV, where it gets hijacked by bad sit-coms. We are still talking about a highly interactive medium. There are lots of choices, and I think the analogy of restaurants is better than anything. There will be MacDonalds, Greek, Italian, Indian, Thai and those great gourmet Pizza shops, all offering something interesting to those who can pay. We aren't talking about a 50 channel universe, or even 500 or 5,000. We will have five or 10 million different offerings. That seems to be the way it is shaping up. You will get what you want somewhere out there.

Some people fear what is happening on the Internet, they feel they are getting left behind. This reminds me of people who are concerned that their kids are going to get left behind because they are not computer literate. I try and reassure them that they are not missing much and it really doesn't take all that long to catch up. I think the school system is the same way, because it takes 12 years to go through it, everyone thinks that there is a lot to it. In reality, you could probably learn everything you need to know for the final exams in a couple of months.

Don't worry. Relax, get someone who knows their stuff and can get you set up and you will be amazed. Ultimately the Internet is about communication. Almost everyone can communicate, and it is really a small barrier to getting there. It is like they just invented post offices and people don't know how to open the doors to the post offices yet. They will learn. Computers will continue to get easier to use. The doors will open.

If you are on the Internet already, you may want to check out our new World Wide Web site URL– http://www.wimsey.com/tcp/ to read *The Computer Paper*. We have begun putting recent issues online in a hypertext format.

Enjoy the issue

Douglas Alder
editor@tcp.mindlink.bc.ca

CANADA'S BEST CHOICE

Over 29,000 Systems Sold

EASY LEASE TO OWN ALWAYS AVAILABLE
Leases start at $40/mth/1000 for 3 years

NOTEBOOKS WITH ONE YEAR PARTS & LABOUR WARRANTY

ULTINET PVT NOTEBOOKS

Models mono, 4 mb RAM except DX-60/66 (dual scan, 8mb). "/M" indicates multimedia notebook.

Model	80 mb HD AMD™	80 mb HD Intel™	120 mb HD AMD™	120 mb HD Intel™	250 mb HD AMD™	250 mb HD Intel™	340 mb HD AMD™	340 mb HD Intel™
486SX-33	N/A	$1788	N/A	$1876	N/A	$1972	N/A	$2216
486DX-33	$1808	$1830	$1898	$1922	$1994	$2018	$2238	$2261
486DX/2-66	$1912	$1955	$2002	$2048	$2098	$2141	$2343	$2386
486DX/2-66M	$2118	$2160	$2208	$2252	$2304	$2347	$2548	$2590
486DX4-110/M	N/A	$2674	N/A	$2796	N/A	$2861	N/A	$3104
DX-60 with Pentium (TM) processor	N/A		N/A		N/A	$4038	N/A	$4287
DX-66 with Pentium (TM) processor	N/A		N/A		N/A	$4288	N/A	$4537

Upgrade PVT mono to dual scan passive matrix colour	$820
Upgrade PVT mono to active matrix colour	$1874
Upgrade DX-60/66 dual scan with Pentium™ CPU to active matrix colour	$1638
Upgrade 340 to 520 mb hard drive	$254
Upgrade each mb of RAM	$88

Notebook Features	PVT	PVT/Multimedia	PENTIUM
Intel or AMD as ordered	Y	Y	Intel
CPU Type & Landmark Speed	SX-33 110 MHz DX-33 110 MHz DX/2-66 220 MHz	SX-33 110 MHz DX-33 110 MHz DX/2-66 220 MHz DX/4-75 300 MHz DX4/100 330 MHz	Pentium 60 347 MHz Pentium 66 364 MHz
CPU Upgradable To	DX2/66	DX4/75 DX4/100	Y
Base/Max RAM	4/20 mb	4/36 mb	8/40 mb
Local Bus Video RAM	512k	1mb	1mb
Max HDD Capacity	520 mb	520 mb	520
Internal Floppy	1.44 hi density	1.44 hi density	1.44 hi density
Screen Size	8.5"	8.5"	10.5"
Max Ext. Resolution	1024x768 16clrs	1024x768 256clrs	1024x768 256clrs
Int. Screen Resolution	640 x 480	640 x 480	640 x 480
Ext. SVGA Monitor	Simultaneous	Simultaneous	Simultaneous
1 serial & 1 parallel ext. video 2 PCMCIA slots	Y	Y	Y
Battery Type	NiCad	NiCad/NiMH	MMH
Large Built-in Trackball	17 mm	17 mm	25 mm
Docking Chassis	Y	Y	Y
Detachable HDD	2 step process	standard	standard
VESA Local Bus HDD	Y	Y	Y
Built in sound chip	N	Y	Y
Dimensions (inches)	11 x 8.9 x 1.9	11.3 x 9 x 2	11.3 x 10 x 2.4
Weight (incl. battery)	6.2 lbs	6.2 lbs	7.9 lbs
Battery Life 2 - 4 hrs.	Y	Y	Y
SVGA PCMCIA Drivers	included	included	included
Carry Case AC adaptor	included	included	included

DID YOU KNOW

Ultinet Computer Corp. was the first Canadian company to:

- Ship 8 MHz Turbo XTs
- Ship 286-12 MHz Notebooks
- Ship 386SX Notebooks
- Ship VESA VLB minitowers
- Ship 386/486DX Notebooks
- Ship Pentium Notebooks

Ultinet celebrated a decade of growth with its own 40,000 sq. foot building with expanded sales, service & production.

Ultinet is the oldest and most consistent advertiser in Toronto Computes, The Computer Paper and The Toronto Star's High Tech.

MINITOWER VALUE PACKAGES

ALL MINITOWER SYSTEMS
2 YEARS PARTS & LABOUR SYSTEM WARRANTY
5 YEAR WARRANTY ON MOTHERBOARD

ULTINET ULTRA PRO MULTIMEDIA

- Intel™ DX/2-66 CPU
- 3 VESA or 7 ISA slots motherboard
- **Built-in Pentium™ P24T upgrade socket**
- 128k cache on mbd upgradeable to 256k
- **8 mb 70ns fast RAM expandable to 64 mb**
- 1.44 mb floppy disk drive
- 410 mb HDD 13ms 128k cache, fast ATA
- VLB 1 mb Bullet video card, VLB HDD controller
- 2 serial 1 parallel 1 game port
- 101 enh. spillproof kybd & minitower case
- 3-button high resolution 400 dpi mouse
- **15" non interlaced .28 dp SVGA monitor**
- **Built-in deep green power saving features**
- Double speed CD ROM 2 speakers 2 CDs
- 16-bit Thunder Wave stereo sound card

$1981 **$79/MTH**

ULTINET ULTRA PRO PLUS

- Intel™ Pentium™ DX-60 or 66 CPU (+$196)
- 4 PCI 4 ISA slots
- **Built-in Pentium™ Overdrive socket**
- **256k cache on motherboard, 15 ns**
- **8 mb fast 70ns RAM exp. to 128 mb**
- 1.44 mb floppy disk drive
- **540 mb HDD, 12 ms, 256k cache, fast ATA**
- ATI Mach32 or Tseng Lab W32P PCI
- VLB or PCI fast IDE hard disk controller
- 2 serial, 1 parallel 1 game port
- 101 enh. spillproof kybd & minitower case
- **15" non-interlaced .28 dp UVGA monitor**
- **Built-in deep green power saving features**
- 3-button high resolution 400 dpi mouse
- Multimedia (CD-ROM, 16-bit sound, 2 spkrs) add $248

PCI $2513 **$101/MTH**

ULTINET ULTRA PRO SUPREME

- Intel™ Pentium™ DX-90 CPU
- 4 PCI 2 VESA or 5 ISA slots on mbd
- **Built-in Pentium™ Overdrive socket**
- **512k cache on motherboard 15 ns**
- **8 mb fast 70ns RAM exp. to 128 mb**
- 1.44 mb floppy disk drive
- **720 mb HDD 12 ms, 128k cache, fast ATA**
- **ATI Mach 32 or Tseng Lab W32P PCI**
- PCI hard drive IDE controller
- 2 (16550) serial, 1 EPP 1 game port
- 101 enh. spillproof kybd & midtower case
- **15" non-interlaced .28 dp UVGA monitor**
- **Built-in deep green power saving features**
- 3-button high resolution 400 dpi mouse
- Multimedia (CD-ROM 16-bit sound, 2 spkrs) add $248

PCI $3256 **$130/MTH**

UPGRADE ANY MINITOWER TO A MULTIMEDIA SYSTEM

FOR ONLY $249.

Add $249 only for a Panasonic CD-ROM 562, a 16 bit Thunder Wave sound card, pair of speakers and two CDs and you can buy selected groups of 10 educational, family & entertainment CD titles for **only $90**

Upgrade 128k cache to 256k cache $30
RECOMMENDED FOR FAST PERFORMANCE

To Upgrade Bullet Video Card to	**Add**
S3 Video Card 1MB VLB	$30
ATI Graphics Wonder	$78
Mach32D VLB/PCI 1 mb (OEM)	
GX Elite card VLB (2 mb VRAM) 40% FASTER THAN ATI MACH 64	**$209**
ATI Mach32D VLB/PCI 2 mb VRAM (OEM)	$288
ATI Winturbo Mach64 2 mb VRAM PCI only (OEM)	$354
To Add on:	**Add**
Internal 14.4 fax/modem	**$89**
Colorado DJ20 250 mb tape backup	$240
Canon BJ 100 bubble jet printer	$339
Canon BJC 4000 bubble jet printer	$710

To extend regular depot warranty to one year on-site add 5% per year

ULTINET ULTRA PRO BASE PACKAGE

- Genuine Intel™ CPU with 128k onboard cache exp. to 256K
- 410 mb 12 ms fast ATA HDD with 32-bit VESA IDE controller for max. transfer speed from HDD to I/O bus
- 1.44 mb Japanese brand hi-density FDD
- **Fast 4 mb 32-bit 70 ns RAM onboard**
- "Bullet" 1 mb 32-bit VESA LB true colour video card
- 14" 1024 x 768 SVGA noninterlaced .28dp monitor
- **Ultinet** minitower motherboard features:
  - Energy Star full-green power saving with full BIOS support
  - 4x30 pin & 2x72 pin sockets for memory upgrade flexibility
  - Certified Intel™ 83 P24T Pentium™-upgradable socket
  - 3 VESA local bus slots & 7 ISA slots
- Enhanced digital minitower case with 230 watt supply
- 2 serial 1 parallel 1 game port
- Deluxe 101-key spillproof keyboard
- 3-button high resolution 400 dpi mouse

CALL OR FAX (PREFERRED) FOR EXACT REQUIREMENTS

All trademarks & logos are the property of their respective owners.

Model	CPU AMD™	CPU Intel™	LEASE to OWN	LANDMARK SPEED
486DX/2-66	$1339	$1387	$54/mth	220 MHz
486DX/4 100	N/A	$1798	$72/mth	347 MHz
DX-60 with Pentium™ CPU		$1892	$76/mth	354 MHz
DX-60 with Pentium™ CPU PCI Version (PCI video card & IDE controller)		$1972	$79/mth	354 MHz
DX-66 with Pentium™ processor		$2068	$84/mth	362 MHz
DX-66 with Pentium™ CPU PCI Version (PCI video card & IDE controller)		$2166	$87/mth	362 MHz
DX-90 with Pentium™ CPU PCI Version (PCI video card & IDE controller)		$2499	$100/mth	>400MHz

Upgrade 128k to 256 to 256K cache	$30
Upgrade 410 to 540/720 mb 12ms HDD 1280 kb/sec	$69/225
Upg 410 to 1 GB 10 ms IDE or 1 GB 9ms SCSI HDD	$658/700
Upgrade 4 to 8 mb RAM/16 mb RAM	$215/645
Upgrade to mid/full tower case	$28/83
MS Dos 6.2 full package & disks	$59
Upgrade to 15"/17" .28 dp non interlaced monitor	$150/580
Upgrade PCI IDE controller to PCI SCSI controller	$138

COMPLETE YOUR SYSTEM WITH

DOS 6.2 OEM	$59
Win 3.1/3.11 OEM	$59/69
Win 3.11 w/wkgp OEM	$89
Panasonic CD-ROM with controller	$155
Creative Lab Discovery 16 CD kit	$459

With our large, new vested building, we can be reached within 25 minutes from anywhere in Toronto. Our technical experience in notebook & minitower computers is unmatched!

ULTINET YOUR BEST CHOICE

VAR INQUIRIES WELCOME

ULTINET

THE STANDARD OF STABILITY SINCE 1984

100 Bridgeland Avenue, The Ultinet Building, Toronto, ON M6A 1Z4

Tel: (416) 256-2000 Fax: (416) 256-1449

OPEN: MON–THUR 9–7; FRI 9–6; SAT 10–5

CALL OUR 24 HOUR FAXBACK LINE AT (416) 256-5770 FOR PRODUCT INFORMATION BY FAX

Pricing based on cash or lease-to-own. For credit cards, Corporate and Government POs add 3%.

VISA

We ship mail orders across Canada!

Prices subject to

news*bytes*

Neural Network Mimics Human Eye — Matsushita Electric Central Research Institute has developed a neural network which reproduces the human eye's functions. It is an application of a neuro model called "quantized neuron" and can perform a wide variety of recognition tasks according to the company.

Newsweek Sniffs Out Internet Piracy — Some $2 billion worth of software was stolen over the Internet last year according to a recent latest issue of Newsweek. The news magazine looked at software theft on the Internet in the wake of the discovery that pirates on the "Net" were downloading versions of Windows 95 and OS/2 Warp prompting Microsoft to post a $10,000 bounty for information.

Canadian Internet Access Providers — A Toronto-based group has launched two sister companies to provide Internet access for large organizations and individuals. Universal Gateway Corp. provides dial-up access to the Internet while the affiliated Consolidated Access & Networks Inc. sets up corporate Internet systems.

Spyglass Announces 10 Million Mosaic Licenses — Spyglass Inc. has licensed more than 10 million copies of its Enhanced NCSA Mosaic graphical Internet browser, the firm announced. AT&T pushed the popular browser past the multi-zero milestone when it decided to distribute the program internally on its World Wide Web browsing program.

➤

Imagine... the world at your fingertips. So easily accessible, it's like reaching out and touching it. Internet is the world of information. It's the Information Superhighway, and HookUp is your best way there.

Our lines offer smooth, crystal-clear fibre optic connections. Imagine...the cost efficiency of e-mail, the convenience of ***Internet's*** information retrieval tools, and the helpful guidance of HookUp's service representatives. Plug into the world today, the most convenient way, with HookUp.

Call now
1-800-363-0400

e-mail: info@hookup.net

THE COMPUTER PAPER

PUBLISHER / EDITOR Douglas Alder
ASSOCIATE PUBLISHER Hari Singh Khalsa
MANAGING EDITOR Graeme Bennett
NEWS EDITOR David Tanaka
PRODUCTION MANAGER Kim Krapik
PRODUCTION STAFF Kent Barrett, Kim Fedor, Jana Kolar, Ernest Stelzer, Jenny Winterbottom
COVER DESIGN & LAYOUT Graeme Bennett
COVER ILLUSTRATION Walter Stanszuk
CONTROLLER Christine McPhie
SECRETARY TREASURER Kathryn Alexander
NATIONAL AD SALES John Oliver
(416) 588-1580 Toronto

VANCOUVER OFFICE
B.C. AD SALES Dyal Singh Khalsa, Kit Griffin
(604) 733-5596
BCSales@TCP.MINDLINK.BC.CA
PRINTER Transcontinental West

PRAIRIE OFFICE
ALBERTA MANAGER Patricia FitzGerald
OFFICE ADMINISTRATOR John Gagel
MANITOBA MANAGER Suzanne FitzGerald
PRAIRIE AD SALES Suzanne + Jennifer FitzGerald
Calgary (403) 228-3555
Edmonton (403) 459-3554
Winnipeg (204) 949-7720
PRINTER Calgary Sun

TORONTO OFFICE
ONTARIO AD SALES (416) 588-1580
Yvette Doucette, John Oliver
Tino Wong
ONSales@TCPON.COM
ADMINISTRATOR Maureen McKee
AD COORDINATOR Sangeeta Seth
PRODUCTION STAFF Ann Bernardo, Helga Stitt, Douglas Sweet
PRINTER Metroland

EASTERN OFFICES
OTTAWA AD SALES Einar Murchison
(613)789-6431
OTTSales@TCPON.COM
MONTREAL AD SALES Frank Kovacs
(514) 843-4770
MTLSales@TCPON.COM
HALIFAX AD SALES Judy Publicover
(902) 457-4390
QUEBEC & ATLANTIC 1-800-465-3517

SUBSCRIPTIONS
To have 12 issues of *The Computer Paper* mailed directly to your home (in Canada), send a cheque for $24.95 to Suite #8, 3661 West 4th Ave., Vancouver, B.C. V6R 1P2. American subscriptions please send $80 in US funds. Overseas please send $99 Canadian (first class).

THIS IS VOLUME 7 NO. 12,
DECEMBER 1994

The Computer Paper is published monthly by Canada Computer Paper Inc. All rights reserved. Reproduction in whole or in part without the permission of the publisher is strictly prohibited. The opinions expressed in articles are not necessarily those of the publisher. Information presented here is compiled from sources believed to be accurate, however, the publisher assumes no responsibility for errors or omissions.

Canada Computer Paper Inc.
BRITISH COLUMBIA: 60,000 Circulation
#8, 3661 W. 4th Ave., Vancouver BC V6R 1P2
Phone: (604) 733-5596, Fax (604) 732-4280
BBS Number: Mind Link! (604) 576-1214 (Log on with the name "Computer Paper") CompuServe: 72627,1732 GEnie: TCP

ALBERTA: 50,000 Circulation
MANITOBA: 25,000 Circulation
Prairie Office
The Devonian Building, Suite 300,
908 17 Avenue S.W. Calgary, AB T2T 0A3
Calgary (403) 228-3555
Fax (403) 228-3456
Edmonton (403) 459-3554
Fax (403) 491-0160
Winnipeg (204) 949-7720
Fax (204) 949-7721
ONTARIO: 100,000 Circulation
408-99 Atlantic Ave.
Toronto, Ontario M6K 3J8
Tel: (416) 588-1580 Fax (416) 588-8374
BBS Number: CRS Online (416) 213-6002

EASTERN: 75,000 Circulation
Montreal Office: 360 Notre Dame Ouest, Suite G-01A,
Montreal, Quebec H2Y 1T9 Phone: (514) 843-4770
1-800-671-6380, Fax (514) 843-3684

Ottawa: (613) 789-6431 Fax (613)789-6413

Quebec, Ontario & East 1-800-465-3517

E-MAIL
Letters@TCP.MINDLINK.BC.CA
Editorial@TCP.MINDLINK.BC.CA
Classifieds @TCP.MINDLINK.BC.CA

Canadian Publication Mail, Sales Product Agreement #10251
Printed in Canada ISSN 1185-3454
Member of the BPA Division of the FCMI
CCAB

The publisher reserves the right to refuse ads of a sexual or violent nature, or ads which may be deemed to propagate sexual or racial stereotypes. Specifically, ads referring to Adult Software or X-rated software will be refused. The publisher reserves the right to be the final judge of what is considered appropriate. For a copy of our full policy please contact your sales representative.

newsbytes

France Discusses Online Highway — The French government is debating a proposal to expand the existing Minitel online service project into a fully fledged data "highway" reaching every house and office in France.

Sprint Canada Network — Sprint Canada Inc. has announced plans to spend $180 million building its own communications network in parts of Canada where telephone traffic is heavy. The company will kick the effort off by laying optical fiber along a right-of-way owned by a shareholder in one of its biggest rivals.

Phone Fraud Ringleader Pleads Guilty — The European leader of an international ring of phone hackers has pleaded guilty to stealing thousands of telephone calling card numbers used to make US$100 million in unauthorized long-distance calls.

Cellular Community Watch — The coastal city of Oxnard, California, has joined a growing number of cities that use cellular phones in a volunteer Cellular Community Watch anti-crime program. The hardware and phone accounts were donated by Cellular One, a division of AT&T's McCaw Cellular operation.

Windows TCP/IP Over Cellular — WRQ, which is known as Wick Hill in the UK, has unveiled a new version of its Reflection TCP/IP (Transmission Control Protocol/Internet Protocol) for Windows networking communications package. The package bridges the gap between PC platform and mainframe environments using software terminal emulation but, as an added advantage, supports TCP/IP across cellular phone links.

First "Underwater" Cellular Service — Cellular One together with the Port Authority of New York and New Jersey have strung the equivalent of a cellular antenna through the Lincoln Tunnel, under the Hudson River.

Hong Kong Wireless Phone Use to Hit 50 Percent — Wireless phones will be carried by half of Hong Kong's adults by the year 2000. That was the prediction given by Neil Montefiore, managing director of Chevalier (Telepoint) when he addressed the DECT, CT2 and Cordless Communications Third Annual Forum in London recently.

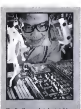
Wireless Office Growth Predicted — Market research firm Frost and Sullivan predicts that the market for wireless office equipment will increase nearly 20 times over 1993 levels by the year 2000. In dollar figures, the predicted increase is from US$101 million in 1993 to more than $1.9 billion in 2000.

Feds study Cable-Telephone Barriers — The Canadian government has begun a review of its telecommunications and broadcast policies aimed at promoting the so-called information highway and likely to give telephone companies and cable television operators carte blanche to enter each other's businesses.

Telecommuting & Remote LAN Driving ISDN Sales — According to a report from Ovum, the market research company, the main source of demand for ISDN (integrated services digital network) connections by the end of the decade will come from people working from home via an ISDN link to their local office LAN (local area network).

Fujitsu Intros Fast Tablet PC — In a move the company

Continued on page 14



Man Van Ho, manufacturing technician, inspects placement of powerful Alpha microprocessor on new AlphaServer circuit board at Digital Equipment Corporation's manufacturing plant in Kanata, ON.

VIRTUAL CORPORATION...

There's a new kind of computer corporation in town. Lean. Mean. A techno-dream machine. We're Impulse. We're different. With our team of ISO-9000 certified factories, we bring you the world's most advanced notebooks at the hottest prices. Now you can get everything you ever dreamed about in a notebook. It is virtually possible!

.....VIRTUAL REALITY

Impulse POWERLITE 855P Pentium Notebook

Fast. Powerful. Lightweight. Sensational Colour. Superb Graphics. Get tomorrow's technology today from Impulse. Leading-edge notebooks at the most affordable prices. Go with your Impulse.

- 90MHz Pentium Processor • 8Mb RAM (expands to 40Mb)
- 10.4" Active-Matrix TFT or 10.3" DSTN Colour Display
- Intel PCI Local Bus • 16 bit Stereo Audio • PCMCIA Expansion Slots • 340Mb or 720Mb Hard Drive • PowerDock Connector
- MS-DOS® Microsoft® Windows™ for Workgroups

Impulse®

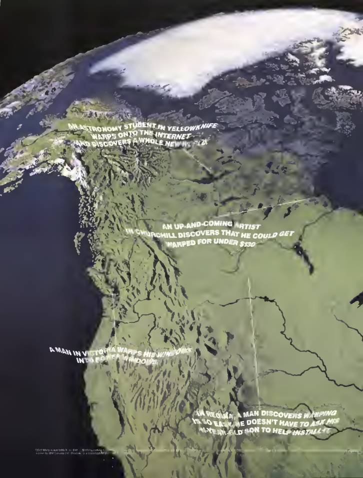
Go With Your Impulse

intel inside
pentium™

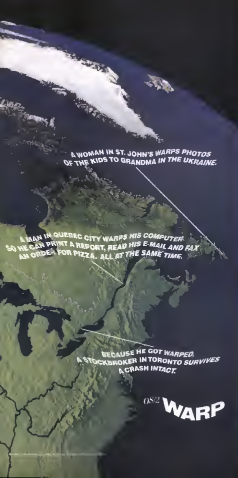
For The Location Of The Dealer Nearest You Call:

800-668-1111 / 905-858-3000 or Fax. 905-858-9090

Impulse is a registered brand name of Impulse Computer Corp. Intel and the Intel logo are registered trademarks of Intel Corporation. Microsoft and MS-DOS are registered trademarks, and Windows is a trademark of Microsoft Corporation.


AN ASTRONOMY STUDENT IN YELLOWKNIFE
WARPS ONTO THE INTERNET
AND DISCOVERS A WHOLE NEW WORLD.
AN UP-AND-COMING ARTIST
IN CHURCHILL DISCOVERS THAT HE COULD GET
WARPED FOR UNDER $130
A MAN IN VICTORIA WARPS HIS WINDOWS
INTO BETTER WINDOWS.
IN REGINA, A MAN DISCOVERS WARPING
IS SO EASY, HE DOESN'T HAVE TO ASK HIS
14-YEAR-OLD SON TO HELP INSTALL IT.

OS/2 Warp is available from IBM ... $129 by calling 1- [illegible]
[illegible] by IBM Canada Ltd. Windows is a trademark of Mi [illegible]



A WOMAN IN ST. JOHN'S WARPS PHOTOS OF THE KIDS TO GRANDMA IN THE UKRAINE.
A MAN IN QUEBEC CITY WARPS HIS COMPUTER. SO HE CAN PRINT A REPORT, READ HIS E-MAIL AND FAX AN ORDER FOR PIZZA. ALL AT THE SAME TIME.
BECAUSE HE GOT WARPED, A STOCKBROKER IN TORONTO SURVIVES A CRASH INTACT.
OS/2 WARP

Introducing
OS/2 WARP

The new 32-bit,
multitasking,
multimedia,
Internet-accessed,
crash-protected,
Windows™-friendly,
easy-to-install,
totally cool way
to run your computer.

Available for
under $130.

OS/2 WARP
from IBM.

It's here

See your IBM
authorized dealer or
software retailer today.
Call 1 [illegible] 4 [illegible] 99
x [illegible]
Or, contact our Internet
e-mail address
[illegible]

IBM

news*bytes*

Continued from page 13

claims sets a new industry agenda for light-weight mobile computing. Fujitsu Personal Systems Inc. (FPSI) has introduced the Stylistic 500, a 2.5-pound "tablet" PC powered by an Intel 486DX2 50 megahertz (MHz) central processing unit (CPU). The company says it is the fastest microprocessor so far to be designed into a tablet computer.

PDA Market To Get Going — Personal digital assistants (PDAs) have been slow to take off so far, mostly because they just don't offer enough value for the price. But in time, PDA manufacturers will get it right, according to Forrester Research Inc.

Common Ground 2.0 — No Hands Software has unveiled Common Ground 2.0, which the company describes as a major upgrade to its software for distributing portable electronic documents.

Targa 2000 Windows Video Card — Truevision has announced the Targa 2000, which it claims is the industry's first affordable full-motion 640 by 480 pixel video capture and playback card for Microsoft Windows.

Lotus Inks New Notes, Ami Pro — Lotus announced plans to roll out the first versions of Notes for SCO (Santa Cruz Operation) Unix, HP UX, and IBM AIX, and to deliver Ami Pro 3.0 for Sun Solaris.

Ultimate business partners

486DX-II 50MHz Notebook
$1,999.00
INTEL 486DX-II 50MHz CPU
INTEL 486DX-II SL-enhanced CPU
16mm built-in track-ball
Local bus video accelerator
PCMCIA type II expansion port
1.44 floppy drive
9.5" 64 gray scale mono LCD display
2 hour battery life
multilevel power management
200 MB Fixed Disk Drive
8 MB System Memory (32 MB Max.)

New Lower Price
INTEL PENTIUM PRO TURBO
$3,699.00
INTEL PENTIUM™ PCI Graphics Workstation
INTEL PENTIUM 90MHz CPU (256KB Cache)
ATI PRO TURBO MACH 64 Video Accelerator
2 MB VRAM Upgradable to 4MB VRAM
Rated at 125 Million WinMarks
64-Bit Processor · 100Hz Flicker Free Refresh Rate
SONY 17" Super Fine (.25)
MultiScan Trinitron Colour Monitor
Energy Star, Color Temperature, Digital Controls
540 MB Fixed Disk Drive w/Cache Memory
8 MB System Memory (128 MB Max.)
(plus all standard features listed)

ULTIMATE ENERGY STAR
$1,950.00
Ultimate Green 486™ Graphics Workstation
INTEL 486 DX-II 66MHz CPU (256KB Cache)
VESA Local Bus, DX4 Ready, Energy Star Compliant
SONY 15" Super Fine (.25)
MultiScan Trinitron Colour Monitor
Energy Star, Color Temperature, Digital Controls
ATI MACH 32 1MB VESA Local Bus Video Accelerator
MACH 32 Accelerator Chip, 16.7 Million Colors
420 MB Fixed Disk Drive w/Cache Memory
8 MB 72-Pin Moly System Memory (64 MB Max.)
(plus all standard features listed)

VLB 486™ 66 MHz System
$1,450.00
VESA Local Bus (32-Bit) 486™ Workstation
INTEL 486 DX-II 66MHz CPU (128KB Cache)
VESA Local Bus, DX4 Ready, Energy Star
14" Super VGA Non-Interlaced (.28) Color Monitor
VESA Local Bus 1MB (32-Bit) Graphics Controller
250 MB IDE Fixed Disk Drive w/Cache Memory
8 MB 72-Pin System Memory (64 MB Max.)
VESA Local Bus (32-Bit) IDE Controller
(plus all standard features listed)

Standard Features
AmPAQ PRO-Series Enhanced 101-Key Keyboard · 1.44 MB High Performance Floppy Disk Drive · AmPAQ PRO-Series Mini-Tower (not shown in ad)
2 Serial, 1 Parallel & 1 Game Port · MICROSOFT DOS 6.2 (installed with license, software & manual) · Complimentary 3-Button Mouse & Mouse Pad

intel inside · NOVELL. · AMPRO · Microsoft

Customer Hotline 1 800 588-2528
Corporate & Government Clients
Eastern (905) 470-7666 / Fax 470-2184 Western (403) 261-4701 / Fax 290-1547

486DX, i486DX, Intel PENTIUM, & the Intel Inside Logo are trademarks of Intel Corporation. All other trademarks are trademarks of their respective companies. Prices are cash discounted, and are subject to change without prior notice.

Xerox Offers New OCR — Xerox says it will be delivering a Windows application programming interface (API) developer's toolkit for the development of its new DocuRT optical character recognition (OCR) technology. The company claims this "technology breakthrough" promises better accuracy, availability, performance and ease-of-use.

Caere & Calera To Merge — Optical character recognition (OCR) and document management specialists Caere Corp. (NASDAQ: CAER) and privately held Calera Recognition Systems have announced a plan whereby Caere will acquire Calera.

Novell Forms Groupware — Novell Inc. says it has formed a groupware division to develop a standard that will eventually lead to a "building block" concept for applications. The idea is to let the user buy just the best features of each application and have them all work together.

Etch A Sketch For Windows — Etch A Sketch, the popular drawing tool, has come to personal computers. ScreenMagic Inc., has released a Windows version of the learning toy that, not only lets the user draw, but comes with sound effects, games, and various wipe-out effects.

Quarterdeck Prepares CleanSweep — Quarterdeck has announced plans to ship its smart uninstaller, CleanSweep, sometime this fall. Still in the beta test stage, Quarterdeck claims the program is a "new level" of the features found in MicroHelp's popular "Uninstaller."

Delrina Buys "TalkWorks" —Delrina Corp., publisher of the popular WinFax and WinComm telecommunications programs, has bought AudioFile Inc. of Lexington, Massachusetts. The firm says it will integrate AudioFile's Talk Works for Windows, a PC-Telephony voice communications tool, into its communications products.

The company also plans to beef up its facsimile software offering for the Apple Computer Macintosh with a new release some time in the first half of 1995.

Windows 95's New Goodies — Microsoft and Intel officials announced that Windows 95 will incorporate built-in TAPI (Telephony Application Programming Interface). In addition to support for services that include the "Info Center Universal Inbox," new data conferencing and serial communications architecture," speech processing, remote network access, and "automatic Internet access."

Mindscape Buys French Entertainment Developer — Mindscape Inc., a leading publisher of software for the entertainment, education and reference markets formerly known as The Software Toolworks, has announced the purchase for an undisclosed sum of cash of Atreid Concept, a privately held entertainment software development company located in Bordeaux, France.

Borland Buys Dashboard — Borland International Inc. has acquired Dashboard for Windows from Hewlett Packard (HP) for an undisclosed sum.

EC Plans Huge Funding For IT Research — The European Commission has allocated 6,000 million European Currency Units (ECUs) or about US$7,350 million in grants to IT (information technology) and the general sciences.

➤

news*bytes*

Toshiba's Real-Time Video Encoder — Toshiba has announced a video encoder that achieves real-time compression of digital motion pictures at resolutions specified in the MPEG-2 standard. The encoder brings practical multimedia networks and services a step closer to reality, declares the firm.

Support Grows for Apple GeoPort — Apple Computer's GeoPort interface, first announced in 1993, has gained new support from 10 influential computer and telephony vendors. GeoPort is a plug-and-play, backward compatible serial interface with a bandwidth 200 times that of a standard serial port.

Dell's Pentiums Offer 128-Bit Video — Dell Computer Corp. has announced a 128-bit PCI (Peripheral Component Interconnect) local bus video option for its recently announced Dimension XPS P90 personal computers and has made 64-bit video standard on all Dimension XPS systems.

IBM's PowerPC Server — IBM's newly unveiled AS/400 Advanced 36, the first machine to use a 64-bit PowerPC-based chip, will be joined next year by new AS/400 machines that add the ability to switch between 64- and 32-bit modes. Also, AS/400 will eventually join AIX, OS/2 and Taligent among the "personalities" supported by IBM's "Shared Services" architecture for PowerPC, previously known as "WorkPlace," Newsbytes has learned.

Kao To Make CD-ROMs— Kao Infosystems Co. has announced plans to produce CD-ROM disks at its factory in Canada, near Ottawa.

Maxtor Claims PCMCIA Hard Disk Breakthrough— Maxtor Corporation has announced the development of what the company claims is the world's first 1.8-inch hard disk drives (HDDs) designed for five millimeter (mm) Type II PCMCIA (Personal Computer Memory Card International Association) slots. The MobileMax Lite 65 and MobileMax Lite 121 hard drives feature capacities of 65 megabytes (MB) and 121MB and 3.3-volt operation for lower power consumption and a non-operating shock specification of 1,000 Gs.

Joint Venture To Make Active-Matrix Displays — The David Sarnoff Research Center and In Focus Systems Inc. have announced plans for a joint venture that will make active-matrix color flat panel displays.

Users Favor Longer Battery — It probably won't be any surprise to most portable computer users, but a recent study indicates that most portable users are willing to accept some degree of increase in computer weight in order to get a significant increase in battery run time between charges.

IBM Intros First PowerPC SMP Servers — IBM has introduced its first three PowerPC SMP (symmetric multiprocessor) servers, plus a new desktop RS/6000 PowerPC workstation priced at $3,995 and a new two node PowerParallel model priced at $145,000, over 60 percent less than previous entry-level PowerParallel systems.

Supercomputer Power For Workstations — Mitsubishi Electric plans to develop a technique for giving workstations supercomputer power by March 1995. The company will use a neuro processor board developed by its semiconductor lab.

Software Stalls PowerPC PCs — IBM personal computers based on the PowerPC processor line, originally slated for launch this month, will not be generally available until 1995. According to the company, the reason is a lack of application software written to take advantage of the PowerPC chips.

US Labor Dept. To Launch Ergonomics Plan — The US Labor Department's Occupational Safety and Health Administration plans a broad set of rules aimed at controlling an epidemic of repetitive motion injuries on the job, a problem the agency estimates costs US$100 billion a year in lost work time. The planned "ergonomic standard" would cover some 120 million workers in most companies around the US.

Cognos Announces Oracle, Sybase Deals — Cognos Inc. is angling for more client/server computing business through two deals with major database software vendors. The company announced a new version of its PowerHouse fourth-generation language that supports Oracle Corp.'s Oracle 7 database software, plus a marketing agreement with Sybase Inc.

Norstan Canada Pursues Integration — Norstan Canada Inc. has set up an integration business unit that the company said will go after an emerging market for systems that combine voice, data, video and image capabilities.

Lotus Reports Loss — In a teleconference, Lotus officials reported a 40 percent drop in net income "before non-recurring charges" for third quarter 1994, attributing the "disappointing" results to a decline in revenues from Lotus' European operations. Officials also acknowledged a net loss of $66.4 million for the quarter "after recurring charges," explaining that those charges stemmed mostly from the acquisitions of SoftSwitch and Edge Research. ❑

The Lowest Priced Luxury Printer on the Street.

Stop Kicking Tires.

You're shopping for an economical printer, but you don't want to end up with a stripped down model.

Look no further than Fujitsu's PrintPartner™ 4000, the luxury printer in the low price field.

This affordable 4 ppm workhorse is packed with performance features you'd expect to find on printers costing much more. Superior to standard 300 dpi printing with Fujitsu's Enhanced Imaging Technology (FEIT) and Micro Fine Toner. PCL 5 resident emulation (HP LaserJet III compatible), and a user installable PostScript option.

If your application demands even greater speed, choose the new PrintPartner 8000, our 8 ppm high performance model.

PrintPartner 4000

Best of all, the PrintPartner 4000 and 8000 LED printers are covered by Fujitsu's unique Warranty Plus On-Site Exchange Program.*

So get on the road to economical printing with luxury printers from Fujitsu. **Call 1-800-263-8716 (8:30 a.m.- 5:00 p.m. EST) for the location of your nearest Fujitsu dealer. In Toronto: (905) 602-5454**

Free Memory
One additional MB factory installed (m.s.r.p. $195)

FUJITSU

Warranty
Plus
Program

IT'S THE WAY YOU WANT TO PRINT

Fujitsu Canada, Inc., 2800 Matheson Blvd. East, Mississauga, Ontario L4W 4X5 Fax: (905) 602-5457

PrintPartner is a registered trademark of Fujitsu. *2 year parts and labour warranty. Free 1st year on-site exchange. **While quantities last.

ANALYSIS

Let the Chips Fall Where They May
Marketing the Architectures

BY GEOF WHEELWRIGHT

Last summer's announcement by Intel and Hewlett Packard that they would merge their future microprocessor architectures set off a furor of speculation about what this would mean for the future of the x86 family, the PowerPC and civilization as we know it

Sage observers suggested that this was Intel's way of putting the brakes on DEC's Alpha and the IBM led PowerPC brigade, while the more brash of those in the RISC camp sucked through their teeth and proclaimed that Intel had thrown up its hands in disgust at the state of Pentium sales and admitted that it needed a RISC architecture to save itself from certain doom. And of course they all said that they would come out the winners in any such battle because they were already selling RISC chips while Intel was still years away from developing anything with HP

Upon closer inspection of such reports in the July trade press the phrase "silly season" comes to mind The whole argument about Intel versus RISC is mostly bogus and where it does merit some discussion has been completely overhyped by irrelevant comparisons

Let's start by looking at the idea of the outdated boring old CISC architecture (Complex Instruction Set Computing typified by Intel's x86 family) being inevitably supplanted by the sparkling, fresh and innovative approach of superfast RISC (Reduced Instruction Set Computing, championed by the likes of IBM MIPS, DEC and anyone else who isn't Intel)

As Woody Allen said in one of his better moments, "this is a travesty of two mockeries of a sham." RISC systems are glamorized as having sleek and fast instruction sets that can quickly build complex instructions when they are needed, without being weighed down by the cost of having them all on the silicon.

In fact, some of the latest RISC systems actually have a greater number of instructions than today's typical CISC systems. Almost all new CISC systems incorporate RISC design concepts to one extent or another RISC is an integral part of all modern processor architectures to a greater or lesser degree, depending on design

What looks a more likely explanation is that RISC vendors have glommed onto the acronym RISC as their way of declaring they are "Really Intel-Superior Competitors." The name really has very little to do with any kind of technological battle but rather a marketing one Those IBM and DEC types who told the world they were glad to see that Intel was "legitimizing" the RISC market by announcing its deal with HP were really just making mischief The fact of the matter is that Intel has been in the RISC market for a long time and remains committed to being there for a long time to come

The point is simply that HP and Intel are developing this PA RISC and x86-compatible super processor for the long term They cannot realistically be expecting to challenge today's processors with it That would be like someone coming out with a chip now that compared itself to the 386 or the Motorola 68020 — it would raise nothing so much as a huge "so what" from the industry

HP and Intel, for their part are making it clear that it isn't even really RISC architecture that they will be basing their processor project upon It's PISC (Parallel Instruction Set Computing) and will use elements of VLIW (Very Long Instruction Word) technology to achieve much higher levels of performance than current CISC and RISC architectures. ❑

It won't take away all of your excuses for not doing your homework.

Easily add colour for under $59

Just the believable ones.

Clear, sharp black & white printing.

Easily add colour for under $59 with HP's optional Color Kit.

Simple to use for kids to CEOs

Prints everything from postcards to legal-size

Backed by a full three year warranty.

For more information call 1-800-387-3867, Dept 200

HP Printers
Make a better impression.

HEWLETT PACKARD

The affordable HP DeskJet 540 home printer is available at these fine Retailers:

Authorized Reseller

Radio Shack
selected locations

Software Zone
Brampton
905-791-6500

Adventure Electronics
all locations

Access Business Centre
Downsview
416-630-3497

Business Depot
all locations

Microcomputer Works
Barrie
705-721-6669

Atmau Computer Systems
all locations

Computer Systems Centre
Toronto
416-927-1921

Computer Odyssey
both locations

Computer Corner
Burlington
905-681-8448

Wise Guy Computers
all locations

Electronic Supermarket
St Catharines
905-684-2388

ANALYSIS

Beyond Windows 95

BY GEOF WHEELWRIGHT

There is life beyond Windows 95 And work on it is already underway at Microsoft, even though Windows 95 itself will not start shipping until the first half of 1995

To give you a better picture of what this future beyond Windows 95 holds for the world's 60 million plus Windows users we offer some insights from inside Microsoft starting with those of Jim Allchin vice president of business systems who is in charge of both the current version of Windows NT and its planned successor, a project which goes by the codename Cairo

Now why you may well ask, would the vast majority of Windows desktop users be interested in Cairo? The reason is that beyond Windows 95 the features of Cairo and any other Windows 95 successor products will begin to merge until they fuse together sometime in the next five years So the future of Cairo also represents the long term future of the mainstream Windows operating system

A Nuts And Bolts View

Allchin offers a strong "nuts and bolts" view of what Cairo and any Windows 95 successors will be all about He pledges that they will be primarily directed to the creation, use organization and finding of information regardless of what or where it is It will also provide a single consistent model for manipulating objects representing information (whether that information is being used by system software or applications)

This new operating systems technology will aid the development of scalable distributed systems dramatically improve ease of use for new users and offer "innovation within an evolutionary framework." What it all boils down to is that Allchin wants to maintain the compatibility and applications base that has made Windows so successful while making use of the kinds of good object-oriented design ideas that have garnered the NeXT Macintosh X Windows and Sun platforms such strong technological praise

When users actually get down to the business of working with future versions of Windows they may find that they need to rethink how they work. No longer will the world be divided up into application and file-based work - everything will be objects (i e instead of a document being identified as a word processed file it will be a document object that opens up whatever applications are necessary to work with that document and there will probably be several applications for any given document)

There will be a single model for interacting with all objects regardless of whether the object is being acted upon by users or on internal operating system process When you 'click on an object for example you will be able to do a number of things with that object without opening it up You'll be able to view it mark it for copying, delete it or send it elsewhere on the network to another user or group of users You will also be able to view the "properties" of the object and make changes to them as needed (one feature which actually does begin in Windows 95)

The operating environment is also likely to look different to different users It will feature a "personal workspace" that is even more customizable than Windows 3 1 or Windows 95, and will provide the basis for how information on your personal desktop is organized and viewed

Public information source access meanwhile will also be an inherent part of the operating system so that users can browse such things as public library catalogs, phone books and store catalogs within a single, object-oriented interface That interface will also demand that a query-based help system be available at all times and that users be able to "clip, mark or copy" objects as they find them.

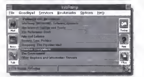
Continued on page 110

Tired of Scratching Your Head On The Internet?

Why put up with this:

```
[illegible]
Login: johndoe
Password:
host % dir
dir: Command not found
host % cd home ^H^H
[illegible] No such file or directory
host % [illegible] ^H
host % help
help: Command not found
host % gopher gopher.anyplace.com
```

When you can have this:



Who said the Internet had to be difficult? The intuitive and easy-to-use Pipeline™ interface to the Internet squashes the learning curve for new users and increases the productivity of experienced netters. With features like the multi-tasking communication protocol—which allow you to download a file in one window while browsing a catalog or reading your news in another, and direct downloads of files to your PC or Mac—your time on the network is spent working—not waiting! At InfoRamp, we offer you Pipeline's award-winning interface and superior service at competitive prices. For more information or to get connected, call InfoRamp today.

InfoRamp
Simplifying the Internet

Tel: (416) 363-9100
e-mail: staff@inforamp.net

Pipeline is a trademark of The Pipeline Network Inc.

PC Software Stocking Stuffers For Nearly Everyone

BY MARTIN P WATERMAN

How do you find Christmas software that will not be New Year's dustware?

Anyone should be able to find some type of software for practically any computer user on their Christmas shopping list, but just because there is a large selection of titles available does not mean you are guaranteed to find the ideal software immediately.

For instance, recreational software has to overcome many obstacles, the largest of which is the fact that many people use computers all day at work or at home to make their living. Therefore the challenge is to find programming exciting enough to bring the dedicated user back to the flickering screen as well as to entice new users such as children adults and even seniors, to try their hand at the joystick or keyboard.

The following are just a few titles that may spark some ideas that can help you satisfy some of those hard-to-shop-for computer users.

Dinner, wine, a toast . . .

Tiles: Betty Crocker's Old Fashioned Cookbook for Windows Micro Wine Companion (DOS version available)
From: Lifestyle Software Group
Title: The Columbia Electronic Dictionary of Quotations (Windows)
From: AAPEX Software

Whether you are cooking traditional fare or wish to try some new recipes you may want to check out **Betty Crocker's Old Fashioned Cookbook for Windows** (US$24 95)

Because it is a multimedia application you will probably want a color screen to view the photos of some of the recipes as well as a sound card (although the program is adequate without them) Also if you are tight on memory you can delete the WAV and BMP files

Betty Crocker's Old Fashioned Cookbook is a database with 267 traditional recipes such as Ginger Glazed Carrots, Baked Honey Onions Beets with Orange Sauce and Roast Turkey with Oyster Stuffing. The latter recipe serves 14 but as is the case with all the recipes, it can be sized to serve practically any group.

For instance, resize for 1,000 people and the ingredients are adjusted automatically Just hope you get a new 4X4 for Christmas for the 71 turkeys, 142 cans of oysters, 35 cups of butter or margarine and so on You can also print your shopping list just to make sure you don't forget anything.

Searching recipes by ingredient is easy and you can also search other ways including a Time Saver Search. While the cookbook is easy to use I wish it had many more recipes There are many cookbooks available from Lifestyle Software including about 10 Betty Crocker titles. They should put them all in one program and offer it at a really affordable price

For those who like wine with Christmas dinner or with just about any other meal, Lifestyle Software has the **Micro Wine Companion** (US$49 95) This program makes many promises ,including being the "Ultimate Wine Cellar Log and Expert System " On their first claim yes, this is an excellent database for your wine cellar On the other hand, the program does not deliver the wine education that it promises You would be better off choosing one of the many wine books available at any book store to learn about wine regions and vintages I found the education part of the program disappointing The program has some inadequate maps of wine producing regions and Canada is not even mentioned.

The program will catalog your wines and display information in a wide variety of ways, including graphs. This includes but is not limited to the cost, value bottles by vintage, type or country, average cost number of bottles plus other items. The program can be customized in many ways. For example you can choose whether $50 or $500 is an extremely expensive wine.

When cataloguing your treasures, you are provided with ample fields in which to enter information. There are space and categories for tasting notes and comments plus, of course, the year when your little darlings will be at their prime

At any time you can search this database for an appropriate wine from your cellar or — if you're like most people — just look in the fridge or cupboard The point is this is highly specialized software for people who really love their wines. The program is best suited for cataloguing retail wines although home wine makers can probably find use for the program if they do make a great deal of wine

If you know someone who usually has about 50 bottles of wine or more or is thinking of building a wine cellar you may find this the ideal gift for their oenological needs.

Of course while you are toasting the season, your friends, relatives and the New Year (in moderation, of course), it could be beneficial to have a good toast or a suitable quote Enter **The Columbia Electronic Dictionary of Quotations** (US$89 95) Needless to say the resource is invaluable for writers public speakers, humorists (amateurs and professional) and, of course, all who appreciate a good quote and literary tidbits

I chose the Bonus Edition of CEDOQ in which you get 50,000 quotations including Columbia Electronic Dictionary of Quotations, Webster's Quotebase, Creative Impulse Collection and Jokesmith Joke Collection. These quotes can be searched by various means and when you find one that you like you can copy it to the windows clipboard ready for quick insertion into your favorite

➤

Byte into our user friendly
Belgian CHOCOLATE Computer

A unique and delicious gift for clients, friends, colleagues and family

GIFT BOXED FOR $27.99

1240 Bay St.,
Toronto, M5R 2A7
(at Cumberland)
964-8880

THE Chocolate MESSENGER

1574 Bayview Ave.,
Toronto, M4G 3B7
(S. of Eglinton)
488-1414

WE SPECIALIZE IN PERSONAL AND CORPORATE ORDERS

UMAX®
VISTA-S6

High Speed Single Pass Colour Scanner with MagicMatch Colour Management and Cold Cathode Technology

NEW!!

Available exclusively through

ADAM PERIPHERALS

Call for dealer nearest you.

Proud Canadian Distributor for AST, Aaxys, Casa Blanca Works, Citizen, Dayna, Focus Enhancements, GCC Technologies, Golden Triangle, Ikegami, Lapis, Megahaus, OptiMac, Phil ps, PSI Integration, Quantum, Ricoh, Roland Music, Samsung, Sigma, Simmauer, Sophisticated Circuits, Sypost, Toshiba, Umax, Xoad

In Toronto call 905-886-2326 • Toll free 1-800-363-2326 • Fax 905-886-2344

application I have several books of quotations but find that the CEDOQ saves me hours of time since I can search by word or topic and have a selection of quotes in a few seconds.

Catch up on the family

Title: Family Roots
From: Quinsept Inc
Titles: Horizons Photo Family Tree (DOS)
From: Lifestyle Software Group

The Holiday season is a time for family and, perhaps, there is no better time to get in touch with your family roots and heritage There are many genealogy programs available It seems to be a market that is quickly evolving which means that it could be wise to do your homework and shop around since many of the applications are quickly gaining features including being available as Windows applications.

Quinsept s **Family Roots** (US$179) can help you with your genealogical research and publishing, from making queries to relatives and keeping track of your research to publishing articles and books Of course the program will display your family information in a number of different ways.

This extensive program comes with an equally extensive manual that is almost 500 pages long It does contain a tutorial and lists for US$179 However this company also has other genealogical software programs (Lineages Family Connections, Tree Charts) from US$29 which include versions for Apple II (not MAC), MS DOS Commodore 64 It is a wise idea to give them a call at 1-800-637 7668 to receive their rather large information packet

Lifestyle Software also has two genealogical programs The first, **Horizons** (US$39 95), is an ideal starter package yet has some sophisticated tools such as point and press menus that make this DOS program easy to use as well as automatic data transfer that allows you to use this information in other programs Horizons sells for US$39 and was designed by a genealogist with 25 years of experience

Photo Family Tree (US$49 95) is a visual genealogy system which allows you to use images from a scanner and organize a slide show for each family group Adding photo capabilities to genealogical software is a powerful tool Fortunately many programs will be adding this feature in the near future plus many of the genealogical software vendors to whom I spoke are planning new versions shortly Photo Family Tree includes GEDCOM (Genealogical Data Communication) Import/export functions the international standard to transfer data between different genealogical databases

This includes the central libraries in Provo Utah This means that rather than laboriously collecting and retyping information it can be imported electronically Obviously this is an important feature if you want to do any comprehensive genealogical research Also you may want to compare features that allow you to put your family heritage on disk ready to be distributed for other family members to view

Retira to the parlor

Title: Multimedia Pool (Windows)
From: Lifestyle Software
Titles: Arcade Entertainment Pack (Windows)
From: Microsoft Canada
Title: Casino Master (Windows, Macintosh)
From: Centron Software

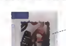
If you are not up to walking off Christmas dinner, you may want to play some games Many games on the market follow familiar themes and old classics are beginning to emerge

My favorite game this season is **Multimedia Pool** (US$39 95) Probably the most amazing thing about this game is that the balls cue and cue english (you can determine where the tip of the pool stick will strike the cue ball) react

➤

Humongous

Software for your laptop now comes in two sizes.



The leanest, meanest all-in-one software for word processing, spreadsheet, database, charting, drawing, painting, and presentations.

New ClarisWorks 3.0 for Windows

Most "works" and "office" products hog disk space and peg out on power Which is why ClarisWorks* software is so popular with so many laptop computer users

Well under 10MB fully installed this full featured, fat free program gives you everything you need when you re on the road And its lean memory requirements and unique design let it keep on going without going through batteries

With ClarisWorks, you can craft correspondence, memos and reports Create powerful presentations and deliver stunning slide shows straight from your laptop Work on budgets and proposals Develop outlines review customer and contact lists and much more ClarisWorks lets you do it all.

That s because ClarisWorks perfectly integrates all the functionality of six software applications into one easy-to-use program Streamlined and extremely responsive it lets you get things done simply and quickly For example you can add graphics charts or a spreadsheet to whatever you write with just a couple of mouse clicks You ll never have to bother with cutting, pasting, linking and embedding—or waiting either

If you re in a hurry Claris Assistants step in to do the hard work for you Assistants guide you through complex tasks like creating tables, and give expert advice on design for presentations newsletters and more You ll also find 150 push-button "Shortcuts" that reduce multistep tasks to a single mouse click.

And when you need to share Microsoft Word WordPerfect. Excel or Lotus 1-2-3 files—no problem—ClarisWorks instantly opens and saves these formats and many more

So get the right size program—the one with nothing but muscle. Get to a phone and order ClarisWorks—or see your Claris dealer—today

Free with your order!

Try ClarisWorks 3 0 today with a 30-day money-back guarantee and get SofNet's *FaxWorks* (a $29 value for faxing directly from your fax modem) absolutely free!

$129*

1 800 361 6075 ext. 418

[illegible]

CLARIS

Simply powerful software.™

Canon
Lotus
SONY
HEWLETT PACKARD
IBM
ATi
Acer
D-Link
NEC
NOVELL
Panasonic
Microsoft
LEXMARK
intel inside
CHEYENNE
S3
WordPerfect
Megahertz
TOSHIBA
adaptec

OVER 19,000 PRODUCTS

GUARANTEE ON ALL OUR PRODUCTS 100%

Your success is our number one goal!

"ACER POWER" open for business!!

Custom ACER Open Series
486 DX2 66 VLB System
4MB RAM
1.44 Floppy
340MB Hard Drive
ACER 1MB VLB Video Card
ACER VLB IDE Controller
ACER Keyboard
ACER Mouse
MS Dos 6.22
MS Windows 3.11
ACER 14" N.I. Monitor
Price $1650

ACER Intel 486DX2 66, PCI SCSI System
Intel 486DX2, with Fast SCSI2 Controller
4MB RAM
(2) 16550 Serial Ports
(1) Enhanced Parallel Port
1.44MB Floppy
340MB SCSI Hard Drive
S3 64Bit 1MB/2MB PCI Video Card
ACER Keyboard
ACER Mouse
MS Dos 6.22
MS Windows 3.11
ACER 14" N.I. Monitor
Price $1999

ACER Intel Pentium 66
Intel Pentium 66Mhz
4MB RAM
1.44MB Floppy
(2) 16550 Serial Ports
(1) Enhanced Parallel Port
340MB Hard Drive
PCI Enhanced IDE
S3 64Bit 1MB/2MB PCI Video Card
ACER Keyboard
ACER Mouse
MS Dos 6.22
MS Windows 3.11
ACER 14" N.I. Monitor
Price $2390

ACER Intel Pentium 90
Intel Pentium 90Mhz
8MB RAM
(2) 16550 Serial Ports
(1) Enhanced Parallel Port
1.44MB Floppy
340MB Hard Drive
PCI Enhanced IDE
S3 64Bit 1MB/2MB PCI Video Card
ACER Keyboard
Acer Mouse
MS Dos 6.22
MS Windows 3.11
ACER 14" N.I. Monitor
Price $2940

BUNDLE 1
Panasonic CR562 Int. CD ROM
ACER Magic 16Bit Soundcard
Amplified Speaker
PFS Works For Windows
Grolliers Encyclopedia
Animals
USA & World Atlas
Mavis Beacon Teaches Typing
Chessmaster 4000
Price $450

BUNDLE 2
Panasonic CR562 Int. CD ROM
ACER Magic 16Bit Soundcard
Amplified Speaker
PFS Works For Windows
Robo Cop 3D
F29 Retaliator
Papertoy 2
Pushover
Epic
Almanac I
Might & Magic II
D-Generation
Contraption
Chessmaker 2100
20th Century Video
Birthday Surprise
Price $450

BUNDLE 3
Panasonic CR562 Int. CD ROM
ACER Magic 16Bit Soundcard
Amplified Speaker
PFS Works For Windows
Family Doctor
20th Century Video Almanac
Software Toolworks Reference Library
Space Mission
Price $450

Lexmark Optra R
1200 X 1200 Dpi
12 ppm
Exp. To 64MB
Enhanced PCL5
Postscript Level 2
Optional 40MB Hardrive
2 Network Slots
Price $2189

MAG

17" or 15"
1280 x 1024 N.I.
Micro Processor Controlled
M PR II Low Radiation
Energy Star Compliant
Sale Price on Limited Quantity

EDUCATIONAL SOFTWARE

Symantec Act for Windows	$289.00	D-Base IV Win 5.0	$192.00
Norton Antivirus	$79.00	Turbo C++	$92.00
Norton Backup	$84.00	Turbo Pascal Win	$82.00
Norton Commander 4.0	$99.00	MS Office	$189.00
Norton PC Anywhere Win	$90.00	MS Word V6.0	$149.00
Symantec C++ Pro	$229.00	MS Foxpro Win 2.6	$139.00
Symantec C++ Standard	$59.00	MS Project Win. 3.0	$189.00
Borland C++ 3.1	$169.00	Visual Win 3.0	$149.00

BYTE INFO SYSTEMS

Computer Products, Service, Price and Quality

111 Regina Road, Unit #7, Woodbridge, Ontario L4L 8N5

Toronto: (416) 324-BYTE
Toll Free 1-800-668-BYTE
Woodbridge: (905) 856-5651
Fax: (905) 856-4820

UPS
VISA
COD Orders

* Fast Delivery Across Canada * Mon. - Fri. 9am - 6pm * Prices are subject to change without notice *Government & Corporate PO's Welcome * Prices are discounted for cash 3%

in a manner consistent with that of a real game of pool. In other words, if Canada had an *Olympic* Billiards team and there was an off season, this is probably how they would train.

At first, I resisted the idea of computer billiards — until I learned that it was cited as a cause for distraction among employees at Lifestyle Software who were often found playing the game. It makes sense; try and hide a real billiards table.

With multimedia pool you are given four games: eight ball, nine ball, straight pool and bumper pool. You can start out by choosing a practice game and soon you will learn how to adjust the angle, cue english and power for your shots. After a few shots, you should be able to take on the computer player with the lowest skill level which, incidently, is Quickshot Cribbs. Eventually you may be skillful enough to play the likes of Jalapeno Kenny or Fast Eddie.

Of course, you can have a two player game but the thing I like best about this game is that it is full of fun challenges. For instance, why not play a game on the moon where the pool balls travel faster and farther. Or, if you want a slower game, play on Jupiter. If that is not enough of a challenge you can adjust the tilt of the table or even magnetize the balls. If you are ever stuck the computer will suggest a shot, including the aim and how much power to use.

Microsoft has two packages of vintage games for those of us who grew up during the time that the arcade and vending video machines were all the rage. The first package is **Microsoft Arcade** ($49.95) which features the classic arcade games of Asteroids, Centipede, Missile Command, Tempest and Battlezone. The first good thing that I can say about Microsoft Arcade is that you don't have to go through the frustration of popping a quarter into an arcade machine in order to be destroyed in a matter of seconds just to learn the game. The second thing I like is that all the games can be customized and, therefore, you can stack the odds a little more in your favor, especially at the beginning. A few extra lives and ammunition can make the game more enjoyable until you get the hang of it. If that were not enough, the help menu will give you tips on strategy that just don't exist in a true arcade environment.

If you are playing a game in less than perfect surroundings, such as at work or school, the "Esc" or "BOSS" key will pause the game. When the coast is clear, simply press ALT+TAB and your game will resume. At $49.95 that is only $10 per game or 40 quarters at the arcade.

The other set of games is The Best of **Microsoft Entertainment Pack** which features 13 games such as Tut's Tomb, TETRIS, FreeCell, Chip's Challenge and Rodent's Revenge. I did not like this game as much as Arcade but that is probably because I was and still am unfamiliar with most of the games. At $34.95 that is about three bucks a game and that seems to be quite reasonable.

Gambling seems to be coming to every part of the country. If it hasn't come to your area yet or you can't spring for air fare to a place like Lost Wages, Nevada, you can still gamble on your computer. Centron Software's **Casino Master** (US$79.95) gives the computer user their choice of Blackjack, Craps, Roulette, Video Poker, Baccarat, Keno and Red Dog.

This program offers an excellent opportunity to help you learn the games. Unlike going to a real casino, you can stack the odds in your favor and customize many of the games. For instance, in Poker, if you think the 3:1 pay off is low for a Full House, you can make the pay off 5:1 or much higher although the game loses its challenge. I am enjoying learning how to shoot craps and some day will master baccarat. Keno and Roulette don't hold much excitement but I notice younger people like these games.

Centron also sells software that promises to help both the novice and expert gamblers hone their skills at the casino. Some people think that computer games are a waste of time and an improper use of your system's resources. At least they prompt you to keep your mouse clean. And to quote the Microsoft Entertainment Pack's README.TXT file, "Games don't Kill productivity, People do!"

Don't Forget the Little People

Titles Fine Artist, Creative Writer (Windows)
From Microsoft Canada

Microsoft has two programs aimed at children aged eight and up. I did a quick survey of kids that I knew who have used the two programs and the result, although somewhat surprising, should have been expected. **Microsoft Fine Artist** was more popular than **Microsoft Creative Writer** ($69.95 each). This makes sense since the majority of kids that I have known want to be artists and not writers.

Both programs have a similar interface and take the user into the imaginary world dubbed "Imaginopolis" with your interactive host McZee. Both programs also take you to a goofy looking building where you can perform tasks on various floors. For instance, in Microsoft Fine Artist, there is a drawing trick floor, a painting studio and a gallery. Fine Artist is much more than a glorified edition of the Windows paintbrush program since it does contain more tools, great, yet often annoying sounds and a good measure of interactive fun.

Microsoft Creative Writer is not as much fun as Artist since there is not the writing equivalent of scribbling and, therefore, more attention is needed. One bright light in this program is the Splot Machine, a slot machine that can give you more than 8,000 ideas for starting your story. This colorful and noisy word processor also has clip-art, special effects, a speller and thesaurus. Both programs are reasonably priced and, in addition to their entertainment value, they also offer an element of learning.

➤

TORONTO'S MOST DEPENDABLE INTERNET SERVICE
InterLog
Internet Services
Email, Usenet News, Gopher, FTP, Mosaic, Telnet,IRC, WAIS
SLIP, PPP, UNIX Shell
Friendly graphical interface to the Internet
Point-and-click software for Windows is included with membership
OS/2 and Macintosh software available
Membership packages to suit everyone's needs – as low as 25¢ an hour
Modem to (416) 515-1414 for more information
Set your terminal programme to 8-N-1, logon as "guest"
Voice support and information: (416) 975-2655
Email: sales@interlog.com

Screen Savers And Unsavers

Title The Far Side Screen Saver Collection (Windows)
From Delrina
Title Crystal Walls (Windows)
From Domain Virtual Worlds Inc.

Two screen saver products have really grabbed my attention this festive season Gary Larson's **The Far Side Screen Saver Collection** ($39 95) delivers 14 animations which, in addition to saving your screen can also help save your sanity especially if you are a Larson aficionado This screen saver is vintage Larson, which should please many of his fans, particularly those who are still in mourning because The Far Side Daily Planner and Calendar Publisher was unceremoniously retired.

Fortunately for those who find that they purchase an entire newspaper just to flip to the Far Side cartoon the Far Side still exists in what many will admit is a better incarnation since the animations are more plentiful and longer in duration than those that were available in the Planner

There are Larson's favorite themes namely cows and dinosaurs and of course the odd alien Amoebas takes us to life under a microscope while visions from Hell is truly one of the funniest things I have ever seen Most of the topics offer several animation scenes while some such as Nerd Clock only contain the single animation

When running the Larson screen saver with a VGA monitor some of the smaller details are hard to see and you need to take closer looks to truly appreciate the fine details This product is but one more reason that you should have a sound board installed in your computer if you haven't already

An advantage of this Delrina product is that it allows you to run modules from other screen saver products, including Intermission and After Dark.

Crystal Walls (US$49 95) is a screen saver, although company officials scorn that designation. Crystal Walls is a wallpaper just like Windows wallpaper with the difference being that it is animated, three dimensional has sound and yes, it is even interactive

Those distinctions aside, Crystal Walls offers 18 distinct worlds that continually run while you do your work. The package comes with a parental advisory warning that "Some worlds may not be suitable for children. You can easily remove the worlds that you do not wish your children to see."

A good example is the Serengeti Savanna scene You get to watch a pride of lions and giraffes However there are also hyenas tearing apart a carcass and a cheetah chasing a gazelle Serengeti Savanna is also an interactive screen. For instance, click on one of the lions and he will yawn for you Pretty impressive stuff

There is a wide selection of scenes from which to choose but they differ dramatically in style and content You can watch the earth rise from the moon or you can watch different kinds of fruit diving into a bowl of fruit punch Other notable titles are ones that feature gargoyles brunch, a fashion show and superheroes

The fact that the program takes up a ton of system resources and slows down the computer not withstanding this is an interesting program that perhaps anticipates the direction that many screen savers or at least wallpaper products, may be heading. Some of the animation is very good but in some scenes the movement is jolty Other scenes appear amateurish and look as if they were drawn by children using Microsoft Artist. If you are searching for a different look for your computer screen this season Crystal Walls may appeal to you.

Keep them in Stitches

Title PC Stitch for Windows
From M&R Enterprises
Title Quilter's Design Studio (Windows)
From QuiltSoft

PC Stitch for Windows (US$79 95) is the premier cross stitch pattern design software earning it a place as a *PC Magazine* Award of Excellence finalist. You can import images directly from any BMP, PCX, TIF or GIF or even from the windows clipboard In other words, take your favorite Christmas photo, scan it and import in into PC Stitch and you can have yourself a pattern that is sizable up to 500 by 500 stitches. The colors that you use for your pattern will be automatically adjusted to popular colors from 360 DMC Anchor & J&P Coats Thread Colors so that you have the thread numbers available when you purchase your needed material.

The PC Stitch design window is straightforward, easy to use and allows you to create your own original patterns This can offer substantial savings which will be underlined if you have ever seen the prices that some cross stitch patterns are selling for these days

Quilter's Design Studio (US$99) is software for designing and helping anyone to make quilts It comes in both a Windows and Macintosh version With this program you can print templates calculate yardage, and copy rotate and flip blocks When I spoke with a representative of the company I was reprimanded for suggesting that the type of person that was likely to quilt was also likely to belong to the pre computer generation As it turns out quilt making has won over many new and younger converts and they, as well as other quilters of all ages, are using this software to help them create original and traditional designs

Bumper to Bumper Fun

Title Slapsticks (Laser Printer)
From William and Macias Inc

If you are looking for a small stocking stuffer consider giving **SlapSticks** — bumper sticker paper ready to go through any printer Just think of the possibilities There are two different types of bumper stickers one with a temporary adhesive and one with a removable adhesive The temporary one is recommended for short term applications and allows the SlapSticks to be washed off with soap and water The bumper stickers are

➤

HEWLETT PACKARD
Authorized Retailer

intel inside pentium

Hours:
Mon - Fri 10am - 6pm
Sat 10am - 5pm
Sun 11am - 4pm
Sunday Open at Markham Only

Connell

OPEN SUNDAY

MARKHAM
(905) 475-8000
Warden Ave
Kennedy Rd
14th Ave
Steeles Ave
Unit 112 18 Crown Steel Dr
Fax. (905) 475-0666

TORONTO
(416) 360-6368
Yonge St
Church St
Jarvis St
Queen St E
111a Queen Street E
Fax (416) 360-0487

Pentium 90 PCI
8MB Ram / 720MB Hard Drive
- Genuine INTEL Pentium PCI Board
- Intel Pentium 90Mhz CPU 256K Cache
- 8MB (72 pin) Ram exp to 128MB
- PCI IDE Interface Controller
- 720MB IDE Hard Drive
- Panasonic 3 5" 1 44MB Floppy Drive
- 15" Flat Screen Monitor Low Radiation 1024 X 768 Non-Interlaced 28dp
- ATI PCI Ultra Pro* 2MB VRAM Video
- 2 (16550) Serial & 1 Parallel Port
- Keytronic 101 Key Keyboard
- Professional Super Mini Tower Case
- 250 Watt Power Supply
- Microsoft or Logitech Mouse*
- Microsoft DOS 6 22* w/ Manual & Disks
- Two Year Labour & One Year Parts Carry-in Warranty

$3395

486DX2/66 VESA
8MB Ram / 540MB Hard Drive
- Intel 486DX2/66Mhz CPU
- 128K Cache expandable to 256K
- 8MB (72 pin) Ram exp to 128MB
- VESA Local Bus IDE Interface
- 540MB IDE Hard Drive
- Panasonic 3 5" 1 44MB Floppy Drive
- 15" Flat Screen Monitor Low Radiation 1024 X 768 Non-Interlaced 28dp
- Cirrus Logic 5428 VL Bus 1MB Video
- 2 Serial / 1 Parallel / 1 Game Port
- Keytronic 101 Key Keyboard
- Professional Super Mini Tower Case
- 220 Watt Power Supply
- Microsoft or Logitech Mouse*
- Microsoft DOS 6 22* w/ manual & disks
- Two Year Labour & One Year Parts Carry-in Warranty

$1965

486DX2/66 VESA
4MB Ram / 420MB Hard Drive
- Intel 486DX2/66 Mhz CPU
- 128K Cache expandable to 256K
- 4MB Ram expandable to 128MB
- VESA Local Bus IDE Interface
- 420MB IDE Hard Drive
- Panasonic 3 5" 1 44MB Floppy Drive
- 14" SVGA Monitor 1024 X 768 Non-Interlaced 28dp
- Trident 9400 VL Bus 1MB Video
- 2 Serial / 1 Parallel / 1 Game Port
- 101 Key Enhanced Keyboard
- Mini Tower Case
- 220 Watt Power Supply
- Microsoft Compatible Mouse
- Microsoft DOS 6 22* w/ manual & disks
- Two Year Labour & One Year Parts Carry-in Warranty

$1459

486SX33 VESA
4MB Ram / 270MB Hard Drive
- Intel 486SX33 Mhz CPU
- 128K Cache expandable to 256K
- 4MB Ram expandable to 128MB
- 270MB IDE Hard Drive
- Panasonic 3 5" 1 44MB Floppy Drive
- 14" SVGA Monitor 1024 X 768 Non-Interlaced 28dp
- Trident 512K Video card
- 2 Serial / 1 Parallel / 1 Game Port
- 101 Key Enhanced Keyboard
- Mini Tower Case
- 220 Watt Power Supply
- Microsoft Compatible Mouse
- Microsoft DOS 6 22* w/ manual & disks
- Two Year Labour & One Year Parts Carry-in Warranty

$1239

• HARDWARE • SOFTWARE • REPAIR • UPGRADE • NETWORKING • SERVICE •

ideal for clubs, schools, fund raising, advertising, promotions and of course social and political statements. The stickers come in two sizes: either three (2.5 x 11 inches) or two (3.5 x 11 inches) bumper stickers on an 8.5 x 11 inch sheet. Packages of 60 of the small size or 40 of the large size are US$19.95.

The Real Meaning of Christmas

Title Logos Bible Study Software (Windows)
From Logos Research Systems Inc

Logos Bible Study Software can help you cut through the commercialism of the season and discover the true meaning of Christmas. Logos Research Systems was founded in 1991 by two former employees of Microsoft Corp. and since then the company has grown to include a vast product line of Bible related software.

The foundation of the product line is Logos Bible Software 1.6 which comes in a single version for US$129 or a dual version which includes your choice of another Bible for US$149 or US$159, depending on which Bible you choose. Both versions come with The King James Version of the Bible, Strong's Numbers, enhanced dictionary and the Treasury of Knowledge cross references.

The software gives the theologian, researcher or interested individual the power to search various Bibles, compare several side by side and verse for verse, and to hone in on the meaning of words, whether they are in an English, Hebrew or Greek. You can continually add different Bibles such as The New Kings James Version, New Revised Standard Version with Apocrypha, The New Century Version as well as other versions including Hebrew and Greek. The add on Bibles cost from US$29.95 to US$59.95.

This program is powerful and practical yet has all types of additional functions such as DDF (Dynamic Data Exchange), Phrase search, wild card and proximity searches and the ability to make notes and place bookmarks. The Logos Bible software also works with the Logos Bible Atlas ($79.95) which features maps that relate to times and circumstances throughout Bible History. Although the Atlas is a stand alone product, click on a verse that is mentioned in reference to a map and the Logos Bible Software is automatically brought forward complete with the passage that was cited.

Lining up several Bibles and comparing popular chapters and verses word for word can show you how many different meanings can be brought out in different translations. Just the thing to start a lively debate with other believers or non believers during the festive season.

Logos Research Systems will be in the news because they will be the first company to release the Dead Sea Scrolls on Interactive CD-ROM thanks to a deal worked out in association with the Israeli Antiquities Authorities. It will be available in both the Windows and Macintosh format for US$59.95. It should be available in time for the Christmas season.

Happy Holidays

With the exception of the Dead Sea Scrolls, the software mentioned in this review come on floppy disks (Microsoft Artist and Writer also come on CD-ROM) and most have some multimedia functions - most notably sound capabilities. The ability to have sound with these products greatly enhances them, which only makes me think that a sound board might be another good stocking stuffer.

The prices quoted in this article are suggested retail. By ordering from a discount mail order source, a discount chain or even ordering direct from the software company, you may be able to find much lower prices. A good example is Casino Master Gold which has a suggested retail of US$79.95 but can be purchased from Micro Warehouse for US$45.95.

Also be aware that more than ever many of the software companies have adopted satisfaction guarantees. Of course, as with all your Christmas presents, remember to keep your receipts.

Happy Holidays and Happy Computing.

Contacts

AAPEX Software Corporation	702-324-4580
Centron Software Technologies	1-800-848-2424
Delrina	1-800-268-6082
Domain Virtual Worlds Inc	1-800-896-7537
Lifestyle Software Group	1-800-288-1187
Logos Research Systems Inc	206-679-6575
Microsoft Canada Inc.	1-800-540-6663
M&R Enterprises	513-263-4122
Quinsept Inc.	800-637-7668
QuikSOFT	619-583-2370
William & Macias Inc	1-800-310-0990

OWN A MODEM?

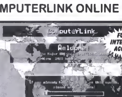
TRY COMPUTERLINK ONLINE FOR *FREE*

"COMPUTERLINK IS A GREAT BOARD FOR THE NEW USER"
-DAVID FORD-MEMBER

"OUR SATELLITE FEED BRINGS IN TONS OF NEW FILES DAILY"
-BILL CAMPBELL-SYSOP

"WITH 71 LINES, ITS A GREAT PLACE TO MEET PEOPLE"
-SUE SYMOTT-MEMBER

COMPUTERLINK SHRINKS THE GLOBAL VILLAGE
TORONTO STAR


ComputerLink
Welcome!
FULL INTERNET ACCESS
F1-help F10=menu RIPscrip 2400 N81 FDX COM3 RIPterm 1.53.00 Online

ACTUAL SCREEN

"AN EXCELLENT SERVICE FOR BEGINNERS AND SOCIAL BUTTERFLIES"
-ONLINE MAGAZINE

"AFTER TRYING MANY BOARDS, I JOINED BECAUSE OF THE SIMPLE INTERFACE, SOCIAL ATMOSPHERE, AND HUGE FILE AREAS"
-BERNIE BLACK-MEMBER

"THE FREE NEW USER SEMINARS ARE VERY USEFUL"
-DAVE MORAN-MEMBER

COMPUTERLINK
"The Easy Way to BBS"
DESIGNED FOR THE NEW USER

- **Full Internet** access-Telnet, FTP, International Chat, and Gopher
- **Personal Internet Email** address, and access to the Usenet News groups
- Over **120 000 Files** available for download with no download limits-ever!
- With **100+ Chat Lines,** ComputerLink is Canada's hottest chat board.
- Multi user **Online Games** (incl. Trivia, Tradewars 2002, Chess, and more.)
- **New User Kit** and manual included with every new membership
- **Free New User Seminars** Every Sat. at 1:00. Call for bookings.
- **Easy to Use Interface** makes surfing the net as simple as point and click
- **One Flat Fee** as low as $9.90 per month for 2 hours per day

PHONE FOR *FREE* TERMINAL PROGRAM AND *FREE* TRIAL ACCOUNT
SUPPORTS ASCII, ANSI, RIP, IBM, MAC & AMIGA, (2400-14400 BPS)
BBS: (416) 233-5410
SALES/TECHNICAL SUPPORT: (416) 233-7150

ACP
Attending to details. Serving you in the finest way
Computer Accessories Specialist

Perfecting your computer business
with quality and durable accessories.

3M
Champ
JetRam™
SONY.
Fullmark
AMQUEST.

OEM Mouse Pad, Mouse Power Bar available.
"FullMark" ribbon BC exclusive distributor
Dealer Only

#120-13751 Mayfield Place, Richmond, B.C. Canada V6V 2G9
Ph (604)278-2811 Fax (604)278-1211 toll free: 1-800 567-7227

DTS COMPUTERS
Call:(416) 255-2679
2884 Lakeshore Blvd W
Etobicoke Ontario

486SX33-$1050
(Free Estimates)

Systems
486DX33 - $1249
486DX2/66 - $1275
486DX4-100 - CALL!
Pentium 66 - CALL!
Pentium 90 - CALL!

Hard Drives
200MB HD - $219
250MB HD - $235
420MB HD - $299
520MB HD - $369
1 2G SCSI - $650

Fax / Modems
Zoltrix 14 4 INT - $97
Zoltrix 28 8 INT - $209
Zoltrix 14 4 V/F/M - $139
US Robotic INT - $159
External US Robotic - $190

Motherboards
486SX33 - $205
486DX33 - $360
486DX2/66 - $425
486DX4-100 - $925
Pentium 66 - $1250
Pentium 90 - $1550

Multimedia Package Only $275.00
Dual Speed CD ROM W/16 Bit Compatible Sound Card Audio Speakers And 2 Free CD

System Upgrades
Mini Tower To Mid Tower - $ 35
250 HD To 420 HD - $ 60
250 HD To 520 HD - $140
1MB Video To 1MB VLB - $ 15
Multi I/O To VLB Multi I/O - $ 10
Sound Card And Speakers - $ 65
CD ROM Double Speed - $187

Standard Features
128K Cache 3vlb Slots 4MB Ram Multi I/O W/2S 1P & 1G Port 1MB Video 3 5" 1 44MB FDD, 250 HD Mini Tower Case Mouse & Pad 101Ench Keyboard SVGA.39 Color Monitor

Video Cards
1MB Trident Video - $ 77
1MB Cirrus Video - $ 79
1MB Cirrus Video VLB - $ 87
1MB UPG Cirrus Video VLB - $ 95
1MB Upgradeable S3 VLB - $110
1MB UPG ATI PCI - $340

Floppy Drives
3 5" 1 44MB - $ 44 95
5 25" 1 2MB - $ 58 95
250MB Tape BK - $ 215

QEW
Birmingham St.
Islington
6th St.
N
5th St.
Lakeshore Blvd
3 Year Warranty

All Prices Are Cash Discounted And Subject To Change Without Notice Credit Cards Add 3 75% Call For Current Pricing

CHRISTMAS

A Christmas Platter: CD-ROM Gifts

BY ROSS MACDONALD

It won't be long now before we'll all be expected to fax our wish list to Santa who'll respond, in turn, by downloading all our goodies. No more of that annoying hoof damage to the roof! In the meantime, however, we still have to shop for one and all.

But, if you have any CD-ROM-o philes on your shopping list you've been blessed with an easy solution to many a seasonal shopping woe Because the fact of the matter is after buying a CD-ROM drive an insatiable appetite for new disks begins to gnaw ferociously at the innards Computerites love nothing more than more and more fodder for their ravenous electronic friend

Here are loads of CD ROM suggestions for your Christmas list – or even for yourself – grouped between kids and adults and including the manufacturer s suggested retail price (unless otherwise noted) Many of these will be available at retail stores, but the vital stats on the manufacturer or distributor are also included Any "800" phone numbers given have been painstakingly tested to make sure they work in Canada Happy shopping.

For The Kids

Title Zurk s Rainforest Lab
From Soleil Software Inc

Zurk's Rainforest Lab a CD ROM for five to-nine year olds that promises like virtually all kiddyware these days educational stuff disguised as fun As a follow-up to the successful Zurk s Learning Safari the topics covered this time focus on nature and ecology, using the rainforest as a model Includes a photo album a problem solving and search game and a pattern recognition puzzle based on hypothetical Inca art Youngsters can print their own rainforest coloring books for good old fashioned non-digital fun while there's still enough sophistication in the material to keep older kids happy, too Windows and Macintosh $35-45

Titles Somebody Catch My Homework A Promise is a Promise Northern Lights The Soccer Trails
From Discis Knowledge Research Inc

Somebody Catch My Homework an interactive CD ROM based on a book of children s poetry about their experiences at school The agony of tests, inventive excuses for lost homework, cafeteria food and young love are all covered here

There are 18 poems in all each accompanied by lavish ink and watercolor illustrations There's plenty of music narration and sound effects too Kids can improve their reading skills by "clicking" individual words to get pronunciations, in-context explanations and even an optional Spanish translation of the text

A Promise is a Promise another interactive CD-ROM book, this time teaching about family values through the use of legends and stories taken from Inuit culture It was created by Robert Munsch — an author of considerable renown among the parental — in collaboration with Michael Kusugak, an Inuit who Munsch met way up there in the Northwest Territories

The central plot is about a young Inuit girl s promise to her mother and her plan to outwit the Qualluplluit, a creature living below the sea ice

Northern Lights The Soccer Trails, a companion CD ROM book to A Promise is a Promise This time the story comes from Kusugak alone The title is taken from the Inuit belief that the Northern Lights are actually the souls of all the people who lived before us playing soccer in the sky

All three CD ROMs share the interactive features described in Somebody Catch My Homework and each is packed onto a single disk that s compatible with both PC and Macintosh computers. $29 95 (each)

Titles Counting on Frank, Morgan s Trivia Machine
From Electronic Arts EA KIDS

Counting on Frank math for kids aged eight to 11 (grades 2 to 6) Touted as "the first math multimedia interactive book ever " Counting on Frank is a discovery based program that wheedles kids into solving math problems disguised as important points in a mystery story As usual animation video and sound abound as basic arithmetic fractions, percentages geometry and problem solving etc become ostensibly fun activities.

➤

Electronic Arts has done considerable research on how kids are engaged by electronic games, so Counting on Frank is specifically engineered to capture the interest of boys and girls by employing devices that appeal to both Windows and Macintosh. $35 95 (street price)

Morgan's Trivia Machine a question and answer generator for kids seven to 14 years old Morgan the monkey is the host for more than 1,000 questions six skill levels and lots of "eye popping" animation and video clips It's all presented by Morgan's homemade HAM 9000 (ha ha) Trivia Machine that sits in the precocious primate's high-tech tree house Can be played by one or two at a time PC only $50

Titles Big Bugs Lost & Found Megamorph
Night Light X-Ray Vitsie Visits series
From. GTE Entertainment

These are titles for the parents of pre-schoolers who want to give their toddlers a jump on technology and education If your ankle biters can steer a mouse these educational cum interactive toys make for deceptively amusing lessons on various topics.

Big Bugs of course is about insects while **Lost & Found** is a search for objects puzzle Interestingly enough **Megamorph** is one of those image transformation packages but "tooned" into a toddler's level **Night Light** is a night time adventure game thoughtfully designed to help kids overcome their fear of the dark and **X-RAY** can only be described as a "see through" game offering up lots of fun and surprises as you look into a magician's room an Egyptian tomb a toy factory and any of seven other scenes

Perhaps the most ambitious of these titles is the **Vitsie Visits** series which so far comprises three separate disks Vitsie Visits Dinosaurs Vitsie Visits the Ocean and Vitsie Visits Space. "Vitsie" is a red haired, green goggled and playful cartoon character who guides the titillated tots through each titular topic while bursting forth with lots of songs and games and activities along the way A sure hit with the rug rats All titles available in both PC and Macintosh CD-ROM formats.

Title Brain Quest
From Suite International

Based on the best selling educational game for kids **Brain Quest** constitutes a series of four different disks for age groups 9-10 10-11 11 12 and 12 13 Each contains 1 200 questions and answers and can be played alone with a partner or in teams Might be a good alternative to T V if they weren't so much like Jeopardy On CD ROMs to run under either Windows and DOS $29 95 (each)

Title Magic Theatre
From Knowledge Adventure Inc

Magic Theatre is a real pleaser for ages six and up This is a rudimentary but still fun computer animation package that lets developing Disneys choose from endless scenarios and characters to create their own stories in their own little worlds. Of course they can create their own scenarios from scratch too

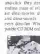
Add music sound effects and even their own voices using the impressive microphone that's included in the package Then save the completed blockbuster for future presentations and posterity As you might expect, this package is somewhat limited in terms of actual production values but who's complaining at $49 95 (street price)? Windows and Macintosh versions

Titles Ancient Lands Dinosaurs Dangerous Creatures
From Microsoft Canada Inc.

Ancient Lands. falling somewhere between kiddyware and adult fare this disk allows you to roam the Rome Greece and Egypt of long since yore by dint of cartoons animation, illustrations and narration Really basic stuff but more controllable than the programming schedules of A&E or TLC when you're in the mood for that kind of thing Windows only $79 95

Dinosaurs another hybrid of kiddy cum adult This time providing a comprehensive and entertaining history of the big lizards.

High quality graphics are plentiful and through the judicious employment of point-and-click they steer you into a seemingly endless maze of related information There are dino-movies dino facts dino pictures and dino-sounds enough for just about every dino-fan Windows equipped PC compatible CD ROM only $79 95



Dangerous Creatures Just like Dinosaurs but about wolves snakes tigers etc Might even generate some interest among the older members of the family Windows only $79 95

Titles Mavis Beacon Teaches Typing for Kids
Merriam Webster's Dictionary for Kids
Mario's Time Machine
From The Software Toolworks

Mavis Beacon Teaches Typing for Kids I suppose if your kids are ever to regard the computer as anything more than a game box they'll have to learn typing sooner or later And this program makes it sooner than you think

➤

43¢ Canada

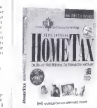
The only other thing you'll need to do your taxes.

HomeTax is easy to install easy to understand easy to use and deadly accurate! Even novice tax preparers can produce perfect tax returns in no time at all! Just follow the easy on-screen instructions and you'll receive every allowable tax deduction

With more than 140 Revenue Canada approved forms and schedules built right in **HomeTax** is Canada's most complete personal tax software And **HomeTax** can help you examine alternatives for year-round tax planning

But that's not all! **HomeTax** includes savings worth over $200 on PC and electronic products in every box!

Pick up HomeTax at your favourite software retailer today!



**Easy to use and accurate!
The complete step by step
tax software
anyone can use
Guaranteed!**

Available on these platforms

DOS

**For more information
please call
THE HOMETAX HOTLINE
(905)624-0303
or fax us at (905) 624-8944**

All trademarks and registered trademarks shown are the property of their respective owners.

Designed for four to eight year olds Mavis Beacon Teaches Typing for Kids stars Mavis B and her dog, Dizzy, who coerce the tots into learning letter recognition and basic typing and keyboard skills, using lots of art work and animation Likely won t show up in any letters to Santa but might well be appreciated at least slightly more than the annual sweater from Aunt Bea Windows and Macintosh $49 95

Merriam Webster's Dictionary for Kids: a "playable" 32 000 word dictionary that features word games like Alphabet Soup, Monster In a Box and lots of others.

Probably about as much fun as Mavis B 's typing lessons but it is an undeniable fact that computerized kids will have an edge in the coming years A decent vocabulary wouldn t hurt either Windows only $49 95

Mario's Time Machine yet another interactive learning package this time disguising history lessons inside games Players can explore 24 different historic periods, cultures and ethnic histories as they travel through time with you know who PC also available on Macintosh floppies $49 95

For Kids At Heart

Contrary to popular belief it s not only the kids who can benefit from the multimedia personal computer It would be impossible to cover everything so only newer stuff and some old favorites are included here

Training
Title Mavis Beacon Teaches Typing V 3
From The Software Toolworks

Few can boast of having mastered good and proper typing And still fewer would deny they could benefit from lessons We'd all sign up except that ... (your excuse here) Now your competence level and insecurities are a matter kept between you and your computer with this enhanced version of the popular typing tutorial Accuracy and speed tracking along with skill building games and exercises keep you somewhat amused as you struggle to learn new tricks Windows $59 95

Title Multimedia Typing Instructor
From Individual Software

It s not hard to figure out what this one's about though how they managed to gainfully employ sound video graphics and animation in such a simple scenario might baffle some PC only $29 95

Music
Title Jazz A Multimedia History
From Compton s New Media

This is a nice little package that tells the story of that curious music form from its origins right up to the present Includes biographies of greats like Duke Ellington Charlie Parker, Louis Armstrong, Miles Davis and even Herbie Hancock Lots of recordings from these and many other notables as well as about a dozen short video clips of historic performances Windows $52.95

FLETCH COMICS
THE CAROL SINGERS WANT TO PLUG IN THEIR MIDI UNIT!

Title Classical Composers Series
From Microsoft Canada Inc

This series of five titles from Microsoft examines the intricacies of specific works by Classical composers (See TCP Oct '94 for full review) Windows only $79 95 (each)

Movies
Title Cinemania
From Microsoft Canada Inc

Cinemania a standard among CD ROM movie references that gives you some kind of information on more than 19 000 items with over 24 000 entries Windows only $79 95

Title Midnight Movie Madness
From Media Multimedia

Midnight Movie Madness: Gilbert Gottfried is the Emcee for this B-Movie extravaganza Not to be confused in any way with Microsoft's Cinemania Midnight Movie Madness does share some of the same features in allowing you to access the information by various categories Here though they're organized into kinky classifications like "Big Monkeys," "Men in Rubber Suits " "Loonies Who Are Not Mad Doctors" and even "Celebrity Lowpoints " (See TCP Oct '94 for full review of Midnight Movie Madness and Cinemania) Windows only $80

Art and Literature
Title Art Gallery
From Microsoft Canada Inc

Art Gallery a digital guided tour through more than 2000 masterpieces synthesized ►

WORLD BASIC*
Intel 486DX2-66 Mhz, 128k Cache
VESA Local Bus,Mini Tower Fan
4 Megabytes Fast RAM
1 44 Megabyte Floppy Disk Drive
345 Megabyte Hard Drive (Brand Name)
32 Bit VESA Video Card & I/O Controller
14 N.I. .28/Green/ISO9000/ 90Hz Monitor
Enhanced 101 Keyboard
3 Button Mouse
$1,349.95

WORLD PRO 66*
Intel 486DX2-66 Mhz 256k Cache
VESA Local Bus GREEN, Fan
4 Megabytes Fast RAM (72 pin)
1 44 Megabyte Floppy Disk Drive
420 Megabyte Hard Drive (Brand Name)
ATI Graphic Wonder 1MB(Upgrd to 2MB)
14" N.I./.28/Green/ISO9000/ 90 Hz Monitor
32 Bit VESA I/O C
Leasing Starting at $55*
Deluxe Pro Mini Tower Case
Keytronic Enhanced 101 Keyboard
Pro 3 Button Mouse
$1,549.95

WORLD PRO 66 PLUS*
Intel 486DX2-66 Mhz, 256k Cache
VESA Local Bus GREEN, Fan
8 Megabytes Fast RAM (72 Pin)
1 44 Megabyte Floppy Disk Drive
540 Megabyte FAST Hard Drive
ATI Graphics Ultra Plus 2 Megabyte
15" Daytek N I./Flat Screen / 28 Monitor
Deluxe Pro 2 Mini Tower Case
Keytronic Enhanced 101 Keyboard
Microsoft Mouse
$2,099.95

WORLD PRO MULTIMEDIA*
Add the following to any
WORLD PRO SYSTEM
Panasonic Double Speed CD-ROM
Soundblaster PRO 16 MCD Sound Card
World Pro Speakers 120 Watts
ALL FOR ONLY! $325!

WORLD PRO P-90*
Intel Pentium 90 256k Cache
PCI Local Bus
8 Megabytes Fast RAM
540 Megabyte Quantum Hard Drive
ATI Graphic Ultra Plus 2 Megabytes
Deluxe Pro 3 FULL Tower Case
MAG DX15F 15" Non-Interlaced Monitor
Honeywell Enhanced 101 Keyboard
MicroSoft Mouse
$3,225.95

EPA POLLUTION PREVENTER

WORLD PRO 66 OPTIONS* Special!
14 4 FAX MODEM ONLY $10!
Hard Drive
540MB Quantum Hard Drive +$75
730MB Quantum Hard Drive +$185
Keyboards
Honeywell 101 Keyboard +$15
Memory
8MB Total Fast R.A.M +$193
Modem
19 2k Voice/Fax Modem +$128
Monitors
15" Acer Non-Interlaced Grn +$175
15" MAG DX15F N I +$210
15" Orchestra Non-Interlaced +$160
17" Acer Non-Interlaced +$600
17" MAG Non-Interlaced +$615
17" Orchestra Non-Interlaced +$655
Software
DOS 6.2 and Windows 3 11 +$100

SATISFACTION GUARANTEE
☐ALL PARTS ARE BRAND NEW!
☐ALL PARTS ARE BRAND NAME!
☐MANUFACTURER WARRANTY!
☐MONEY BACK GUARANTEE!
[illegible]

COMPUWORLD
In Business for Over 9 Years!
4800 Sheppard Ave East, Unit #105
Scarborough, Ontario, M1S 4N5
Sales (416) 299-8191
Service Center (416) 299-8782
Fax Line (416) 299-1105
SINCE 1985

CASES
[illegible]
We Carry many more! Visit our showroom!
CD-ROMS
[illegible]
CONTROLLERS
[illegible]
FAX MODEMS
[illegible]
Don't see the brand you want? CALL!
FLOPPY DRIVES
[illegible]
HARD & TAPE DRIVES
[illegible]
INKJET PRINTERS
[illegible]
DON'T SEE IT? CALL!
LASER PRINTERS & SCANNERS
[illegible]
DON'T SEE IT? GIVE US A CALL!
MONITORS
[illegible]
We can get EVERYTHING Call for pricing!
MOTHERBOARDS
[illegible]
VIDEO CARDS
[illegible]

PROUD TO BE CANADIAN

Group Tech Service
Our professional technicians can upgrade & repair all models of Computers and Monitors in depot. We are also fully authorized service centers for Atari and Commodore brand Computer Systems.

[illegible]

from the real guided tour provided at London's National Gallery. It includes some audio narration and a few animations but essentially consists of pictures and text. Great to look at and somewhat educational despite the basic level of the historic information, this will be a welcome surprise to any student or art aficionado. Windows only. $75.95

Titles: Literature on CD-ROM and other titles
From: World Library Inc

All World Library disks incorporate those special CD-ROM features we relish so much including illustrations, variable display options and on-screen help. They also allow you to set book marks, make on screen notes and print the texts or save them to disk. You can also search all or any of the texts for specific phrases, quotes or words and organize the works by era, age, century, country, subject, title or author. And if your poor little arms are just too strained by holding those big, bad, bulging books up to your face, a last feature is the adjustable scrolling option so you don't have to move a muscle.

Literature on CD-ROM. Not all books are for settling bar bets. Some are actually useful for personal eruditive enhancement. Following is an excellent series of multiple title disks for the inveterate book hoarder who moves a lot. Keep your friends. Switch to CD-ROM.

Great Poetry Classics. 1150 poems, sonnets and psalms. At $50 this is really only of interest to those who would buy the books anyway.

Great Mystery Classics. 171 complete mystery classics for $50. But how Moby Dick, Dante's Inferno and Rip van Winkle came to be "mystery classics" is a mystery in itself. What you actually get is a haphazard literary hodgepodge, the bulk of which is taken up by the complete Sherlock Holmes and tons of Edgar Allen Poe.

Shakespeare Study Guide. If you can't figure this one out from the title you probably can't use it. The complete works of Shakespeare plus selected Barron's Book Notes. The $25 price tag makes this a better buy than many of the even reasonably priced book editions. The built-in concordance is a student's dream.

Greatest Books Collection. 150 complete texts of books, plays, poems and religious and historical documents. $50.

Barron's Book Notes. 101 study guides, America's Cole's Notes. $50

Electronic Home Library. 925 individual literary works ranging, as usual, from essays and poetry through documentaries and novels for $80. Seems we've seen this somewhere before.

Library of the Future (3rd ed.), the complete texts of 1,750 works on one CD-ROM. Unfortunately, one "work" can be a short anonymous poem or a Grimm fairy tale so don't figure on getting 1,750 actual books here. But at $300 it's a fraction of the cost of the paper versions plus it contains virtually everything in the above titles except the Barron's Book Notes.

Reference
Titles: Encarta Bookshelf
From: Microsoft Canada

Encarta: Funk & Wagnall's supermarket encyclopedia on CD-ROM. Easily the most popular among the ever growing CD-ROM encyclopedia herd. It's Encarta's intuitive interface and pleasing presentation that keeps it at the head of the class. Somewhat unsophisticated in its approach, you have to remember that Funk & Wagnall's is really a reference for the acne bunch, there's still lots to learn from the comprehensive collection of video, animation, pictures and text that this disk contains. Windows only. Recently updated for 1994. A bargain at $124.95 (street price)

Bookshelf: a collection of standard reference books on a single CD-ROM. Recently updated, you now get The American Heritage Dictionary, Roget's Thesaurus, The Columbia Dictionary of Quotations, The Concise Columbia Encyclopedia, The Hammond Intermediate World Atlas, The People's Chronology and The World Almanac and Book of Facts, 1994. Windows only. $135 (street price)

Title: Referenzing
From: Great Bear Software

The latest entry in the loadsabooksonCD-ROM race. This one has a dictionary, a thesaurus and an encyclopaedia. Allows the usual cross referencing, searching, etc. Not as good as Microsoft's Bookshelf, but weighs in at virtually 1/3 the price. Windows equipped PC version only. $49.95

Title: The Guinness Multimedia Disc of Records (1994 edition)
From: Grolier Electronic Publishing

➤

2400
dpi film output
$8.75 per page
(8½ x 11)
special offer valid until December 15, 1994 with this ad only.
Scanning b&w or color up to 2400 dpi
Color Separations
Mac/PC All software. Adobe Type Library
Film/Paper up to 3000 dpi/200 lpi
Digital Color Output — Fiery/IRIS/3M
Color Keys — Offset Printing
(416) 920-3040
(Bloor & Avenue Road)

Wishing you happy holidays!
From all the staff at...
COMPUTER PAPER

INTERNET
CONNECTIVITY
FOR INDIVIDUALS

YOU
ARE
HERE.

Think globally.
Dial locally.

Call (416) 363-4151
to sign up online.

Set terminal program to 8-N-1
VT100, VT102 or ANSI emulation
login as 'new'

Email • Usenet News • World Wide Web
FTP • Telnet • Gopher • IRC • UNIX Shell

INTERNEX ONLINE INC.

Toronto's Lowest Cost Internet Service Provider
Support & Info (416) 363-8676 • Voice 10am to 6pm Monday to Friday
Email... info@io.org

INTEL 486
DX33 - $1,259
DX2-66 - $1,388

INTEL Pentium
88 Mhz - $ 2,588
90 Mhz - $ 2,799

DX33 - 340 MB HD (Maxtor)
DX2-66 - 420 MB HD (Quantum)
VLBus motherboard 128K cache
4 MB 72 pins fast RAM
1 44 MB floppy drive (Panasonic)
VLB 32 bits Cirrus Logic 5428
SVGA 1 MB card
VLB 32 bits enhanced IDE I/O card
1 parellel 2 serials 1 game
14" 28 NI monitor (ACER)
Medium tower case with LED
ACER 101 enhanced keyboard
Microsoft compatible mouse / pad

INTEL PCI Local Bus motherboard
256 K cache
8 MB 72 pins fast RAM
540 MB hard drive (Maxtor)
1 44 MB floppy drive (Panasonic)
ATI Mach 32 PCI SVGA 1MB card
1 parellel 2 serials
Build-in 16550 high speed I/O
15" 28 NI 72 Hz SVGA monitor
Medium tower carse with LED
ACER 101 enhanced keyboard
Microsoft compatible mouse / pad
*2 years parts & 5 years labour warranty

Prima Computer Inc.

Markham -
170 Esna Park Drive, Unit 6
Tel (905) 475-7720 475-6147
Fax (905) 475-3341
Downtown -
71 McCaul Street, Unit E-9
Tel (416) 593-2603
Fax (416) 593-1491

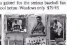
420 MB Quantum hard drive	265
540 MB Maxtor hard drive	309
Intel DX2-66 motherboard, VLB, w 128K cache	475
Intel DX-33 motherboard, VLB, w 128K cache	299
4 MB (72 pins) RAM	call
8 MB (72 pins) RAM	call
1 MB (30 pins) RAM	call
4 MB (30 pins) RAM	call
Creative Lab Digital School multimedia kit w 20 titles	380
Panasonic double speed CD-ROM w 16 bit Sound Blaster card MCD 6 CD titles, speakers	349
16 bit Sound Blaster card MCD	179
Cirrus Logic CL5428 1MB RAM	135
ATI Mach32 1 MB RAM	145
ATI Mach64 2 MB DRAM	299
ATI Mach64 2 MB VRAM	399
Enhanced VL IDE card (4HD)	43
Mid tower case w power supply	65
Full tower case w power supply	88
Power supply	25
ACER enhanced keyboard	34
Keytronic enhanced keyboard	55
1 44 MB floppy drive	45
1 2 MB floppy drive	55
Canon BJ 100 printer	315
Canon BJ 200E printer	345
Canon BJC-4000 printer	719
Canon LBP-430 1MB printer	799
ACER 14" 28 NI monitor	309
ACER 15" 28 FS NI monitor	459
ACER 17" 27 FS NI monitor	859

All prices are already 3% discounted for cash, money order and certified cheque
Prices subject to change without notice

Yessiree Bob! The bane of dilettante bar bettors everywhere, the best selling book in history (next to The Bible that is) **The Guinness Book of Records**, is now available on CD-ROM! Now, instead of mere text and old fashioned black & white pictures on (uggh) plain old paper, you get the same information but tarted up with video clips movies and color pictures. Plus you now have the ability to skim all over the place using the new "Random Record Explorer." Curiously, they're throwing in a copy of the paperback too. Windows and Macintosh. $49 95

Title: Complete Baseball
From: Microsoft Canada

Complete Baseball. Figure it. Facts, numbers, history, teams old radio clips, video clips, every World Series, League Championship Series, All-Star Game and Hall of Fame entry. Trivia galore! For the serious baseball fan or barstool bettor. Windows only $79 95



Title: The Software Toolworks World Atlas, V 5
From: The Software Toolworks

The Software Toolworks Atlas is an upgrade to earlier versions of this popular atlas with information you can actually use. Converts currency, allows you to add your own information to data files and create project specific maps and graphs. The CD ROM version includes audio pronunciations of common phrases from 30 languages and video clips of various places. Of course the usual assortment of international statistics that nobody reads is here too. On floppies and CD-ROM for both PC and Macintosh. $49.95 (floppies) $59 95 (CD-ROM)

Science and Technology

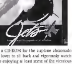
Title: Voyage Through the Solar System
From: Palo/Haklar Multimedia

"Dramatic" photos, slide shows, and full motion video shot by NASA and the Jet Propulsion Laboratory, along with solid educational narration. All combine to make this an excellent addition to any CD-ROM library. A good source of edification that's even better just to look at. The Hollywood based creators have certainly done their homework when it comes to film making. If only other CD ROM publishers would do the same. Both PC and Macintosh versions on one disk. $49 95

Titles: Radiological Anatomy Clinical Pharmacology Human Anatomy
From: Gold Standard Multimedia Inc.

While not anything even approaching the old familiar Home Medical Encyclopaedia, these are exceptionally sophisticated packages for the med. student doctor or any ghoulishly curious members of the family. There are three titles in this series "Radiological Anatomy," "Clinical Pharmacology" and "Human Anatomy," all chock full of blood curdling illustrations and referencing features too elaborate to list here. Any of these will be a more than welcome gift for the appropriate student or as a fascinating reference for the enlightened and curious who are wont to watch "The Operation" on TLC. Each title sells for $195 ("Clinical Pharmacology" update subscriptions cost an additional $295/year) Windows and Macintosh

Title: Jets
From: Medio Multimedia



Jets a CD ROM for the airplane aficionado who loves to sit back and vigorously watch while enjoying at least some of the vicarious thrills of flying. Contains lots of goodies like a short video documentary about the beginnings of the jet engine, then takes off from there with dozens of shorter video clips that are bound to rivet your eyeballs. In fact, the worst thing you can say about the video is that the clips are just too damn short.

There are literally hundreds of photographs of planes and pilots and, for the more archaic enthusiast, the complete texts from the books "The X Planes" by Jay Miller and "Test Pilots" by Richard Hallion. All the text that accompanies the photos is full of point and click options for further exploration and there's loads of the rotating 3-D CADD type graphics more normally seen only in PBS or TLC style documentaries. One of the best animation sequences is a timeline which "morphs" the jet plane's evolution from the ME 262 of 1942 right through to the X-30 – a sort of sub-space airliner that isn't optimistically due to debut until 1997. Windows only $59 95

Continued on page **31**

486DX-33 Mhz 128K

MULTIMEDIA VESA LB SYSTEM

Lease Rate $61.44*

MD Tower Case & 230W P.S.
4M 8cm Fast Ram 70ns
Enhanced 1.1 4B
Japanese 1.44M FD
540M HD Fast 128K Cache
LOCAL BUS Windows Acc. Card
LOCAL BUS IDE Card
14" SVGA N.I. .28mm
Panasonic 562 (Double Speed) Headphones
SOUND BLASTER 16 Sound Card Microphone
DOS 6.2x & Win 3 Shielded Speakers

MPC FREE

PLUS Vol 2 **10 CD TITLES PAK**

$1629

DX2-66 **$1749**

CASH PRICES

Pre-X'mas SALE

Parts & Service Department

CASH PRICES

MOTHERBOARD		I/O CONTROLLER		PRINTERS		MONITORS	
486DX 128K LB	$99.99	GS IDE HD/FD (2S/P/G)	$16.99	HP Deskjet 540	$409.99	EVERVIEW 14" SVGA Grn	$389.99
486DX4 128K	[illegible]	GS IDE HD/FD (2S/P/G) LB	$19.99	HP Deskjet 560C	$609.99	DAYTEK 14" SVGA NI	$299.99
CPT Green LB	$109.99	PCI IDE Controller	$39.99	HP LaserJet 4L	$909.99	DAYTEK 14" SVGA NI 72Hz	$329.99
486DX 256K	[illegible]	PCI SCSI Controller w/SCSI-2 Ext	$79.99	HP LaserJet 4P	$1389.99	DAYTEK 15" SVGA NI LR	$444.99
Micronics MB	$139.99	IDE LB DCME w/FAST I/O	[illegible]	HP LaserJet 4+	$1649.99	DAYTEK 17" SVGA NI LR	$849.99
486 128K	[illegible]	Serial Card 1 x 16550	$49.99	Epson Stylus 800+	$319.99	ADI 4GP 15" SVGA NI	$459.99
PCI Green LB	$169.99	Serial Card 2 x 16550 ... PIN	$48.99	Epson Stylus 720 Color	$729.99	NEC 3V 15"	$499.99
OPTI 128K	[illegible]	I/O Card 2/16550 1/P HD/FD	$79.99	Panasonic 2130	$279.99		
586-66 LB	$219.99	FLOPPY & HARD DRIVES		Panasonic 2135 Color	$309.99	VIDEO CARD	
INTEL 512K	[illegible]			Canon BJ-200	$329.99		
586-... PCI	$494.99	Panasonic 1.2	$56.99	Canon BJC-4000	$499.99	... SVGA VLB 1-2M	$94.99
		Panasonic 1.44	$44.99	FAX/MODEM		ATI Graphic Wonder 1-2M	$144.99
INTEL CPU		WDigital 420M	$279.99			ATI Graphic Ultra + 2M	$214.99
		WDigital 540M	$349.99	DATAFAX 14.4I	$109.99	ATI Graphic Xpression	$269.99
486 SX-25	$99.99	WDigital 730M	$439.99	DATAFAX 14.4E	$144.99	PCI SVGA ATI 1.2M	$129.99
486 SX-33	$129.99	WDigital 1.08G	$479.99	DATAFAX 28.8K	[illegible]	TRIDENT 8900 1M	$79.99
486 DX-33	$169.99	Quantum 540M	$319.99	USR 14.4I	[illegible]	Cirrus Logic 5428 LB 1-2M	$184.99
486 DX2-66	$269.99	Quantum SCSI 1.08G	$489.99	USR 14.4E	[illegible]	KEYBOARD	
586-66	$729.99	Fujitsu 1.08G	$619.99	[illegible]	[illegible]		
586-90	$849.99	Seagate 420M	$279.99	USR 28.8E V.34	$299.99	KANBICH 101 KEY	$16.99
		Seagate 540M	$349.99	INTEL 14.4I	$209.99	KEYTRONIC 5000 101	$29.99
		Maxtor 540M	$319.99	AST 14.4I	$159.99	KEYTRONIC 2000 101	$49.99
		Colorado 250M tape int	$249.99	AST 14.4E	$209.99	KEYTRONIC W...	$59.99

Lifetime Warranty

All Systems Are CSA Approved - Guarantee 48 hrs Burn-in & Tested
2 Yrs Parts & Labour Depot Warranty

486DX-33 Mhz 128K

POWER VESA SYSTEM

MD Tower Case & 230W P.S.
452M HD w/Cache
Japanese 1.44 & 1.2M FD
8M Fast Ram 70ns
LOCAL BUS IDE Card
LOCAL BUS WIN ACC. 1M Card
14" SVGA NI Mon .28
Enhanced 101 KB
DOS 6.2x & WIN 3.1

Lease Rate $61.44*

$1629

DX2-66 PCI

$1849

CASH PRICES

3.5" DSHD Diskette LIFETIME WARRANTY

DISKETTES #1

WHITE BOX

$3.99

BOX OF 10 CASH PRICE

Canada PHONE
1994 3rd Quarter Edition

COMPTON'S 1995 Interactive Encyclopedia

* With any CDR Drive & Sound Card Purchase Only

$39.99 $59.99

CASH PRICE

REBEL ASSAULT OUTPOST

* With any CDR Drive & Sound Card Purchase Only

$39.99

PER TITLE CASH PRICE

USRobotics

28.8 Int. Faxmodem
V.34 with V.42bis

$269.99

CASH PRICE

Microsoft **ENCARTA** OR **COREL DRAW!** 3.0 CDR

* With any CDR Drive & Sound Card Purchase Only

$59.99

PER TITLE CASH PRICE

GAME Software

Every Day Of The Week GST

On all Packing & ... Software Titles

ALL BOOKS 20% OFF

New Products

DOOM 2

$59.99

Cash Price

MICROSOFT 5 CD Bundle
- Encarta - Works 3.0 - Money
- Golf - Musical Instruments
Entertainment Pak 4 (Bonus)

$169.99

MULTIMEDIA PRODUCTS

Golden DV CD	$49.99	Star Trek 25th Anniversary	$29.99
Microsoft Golf	$29.99	Wolf	$24.99
PC-SIG 13th Edition	$39.99	20th Century Almanac	$19.99
King Quest VI	$21.99	World Atlas 5 MPC	$26.99
MS Bookshelf '94	$54.99	Bible Library	$29.99
Aegis Guardian Fleet	$44.99	Learning Fun for Kid	$19.99
Grolier Encyclopedia 6.0	$29.99	[illegible]	$19.99
Microprose Best 4 Games	$34.99	Hellcats OS/2	$24.99
Sim City 2000	$29.99	Mayo Clinic Health Book MPC	$24.99
Darkseed	$24.99	5 Ft 10 Pak (10 CD Titles)	$44.99
Lawnmower Man	$27.99	CD Deluxe (4 Titles)	$29.99
Legend of Oz	$24.99	PC Technician	$29.99
Night Owl 11	$39.99	Sinbad Chess	$34.99
F-117A Night Hawk	$34.99	Mega Race	$24.99
Journeyman Project	$29.99	Return to Zork	$29.99
Desktop Imaging	$19.99	Just Grandma & Me	$24.99
7th Guest	$24.99	Quantum Gate	$29.99
Outpost/Supertext	$19.99	Cyber Race	$34.99
Mario Missing CD	$34.99	Family Doctor 3rd Ed	$34.99
Electronic Home Lib	$14.99	Microcosm	$39.99
EZ Languages (6 Lang.)	$19.99	Mad Dog McCree 2	$39.99
Sports Illustrated '94	$16.99	Cat Came Back	$19.99
Buzz/Space Adventure	$29.99	Arthur's Alphabet	$19.99
TFX	$29.99		

Call for Unlisted Titles
New Titles Arrive Daily

* Some titles must be sold with any CDR Drive &/or Sound Card Only

SOUND BLASTER

16 Value Ed.* 16 MCD*

$114.99 $119.99

CASH PRICES

16 SCSI AWE 32

$229.99 $389.99

SONY BLASTER 16

· SONY 33A Dbl Spd CDR
· Sound Blaster 16 MCD

Compton's Interactive Encyclopedia '94
Mavis Beacon Teaches Typing 2.0
Animals
Chessmaster 4000 Turbo
World Atlas 4
US Atlas 4
Shielded Speakers
Headphones
Microphone

$349.99

CASH PRICES

Microsoft

Office 4.2	Excel 5.0	Word 6.0/w
$599.99	$399.99	$399.99
Upgrade 3.5"	Trade Up	Trade Up
$339.99	$164.99	$169.99
Windows	Baseball	Cinemania
$179.99	$69.99	$69.99
Access 2.0	Space Simulator	Dinosaurs
$419.99	$59.99	$69.99

CASH PRICES

PANASONIC 562 or SONY 33A
64K Buffer
320ms Access
300Kb/S Transfer
Interface Card
2 Data Cables

$169.99

CASH PRICES

TEAC - 55A 4 X SPEED
256K Buffer
195ms Access
600Kb/S Transfer

$389.99

NEC CDR-510 3X SPEED
SCSI 256K
195ms Access
450Kb/S Transfer

$469.99

PANASONIC 562 or SONY 33A
64K Buffer
320ms Access
300Kb/S Transfer

$159.99

TOSHIBA 4101 DOUBLE SPEED
SCSI 64K Buffer
300ms Access
300Kb/S Transfer

$289.99

Digital Playhouse **Edutainment 16**

Panasonic Dbl Spd CDR
Sound Blaster 16 Basic

Include:

20 Software Titles
High Educational Value
Stereo Speakers

$399.99

42 Popular Titles
Hugh Multimedia Value
Microphone
Stereo Speakers

$599.99

CASH PRICES

Sales End NOV 30 '94

LOGIC COMPUTER HOUSE

'Where PRICING & SERVICE Make Sense'

In Order To Keep Our Prices As Low As Possible, We Must Specify All Items Are For Cash Only

Store Hours
Mon-Fri. 9:00a.m - 9:00p.m
Sat. 9:00a.m - 6:00p.m
Sun. 12:00a.m - 5:00p.m

- Government & Corporate PO's Accepted
- Dealers are Welcome

WAREHOUSE OUTLET
7310 Woodbine Avenue
(Denison & Woodbine)
TEL: (905) 415-0808
FAX: (905) 415-0811

MISSISSAUGA LOCATION
1590 Dundas St. E
(Hwy 427 & Dundas)
TEL: (905) 276-9995
FAX: (905) 276-5108

[illegible]

CANADA WIDE SHIPPING NOW $5* PER ORDER

CHRISTMAS IS COMING!

CD-ROM EXPLOSION, MORE SELECTION LOWER PRICES

100'S OF TITLES IN STOCK
MORE ARRIVING WEEKLY
Call for 95' editions

NHL HOCKEY '95
" A MUST HAVE FOR YOU HOCKEY FANS "
$49

BOOKSHELF '94
" A MUST HAVE "
Includes Roget's Thesaurus, World Almanac, Dictionary Quotations, Columbia Encyclopedia, The People's Chronology
$55

WHO KILLED SAM RUPERT
THE MAGIC OF DEATH
THE C.H.A.O.S CONTINUUM
$22 Each or 2 or more for $15 each

7TH GUEST	$39
AMERICAN BUSINESS PHONEBOOK	$19
ANIMALS	$23
BEST OF MICROPROSE	$23
BIBLES AND RELIGION	$16
BIBLE LIBRARY	$27
CARMEN SAN DIEGO DELUX	$39
CHESSMASTER 3000	$23
CONNAN THE CIMMERIAN	$29
CRITICAL PATH	$29
DAY OF THE TENTACLE	$29
DINOSAUR ENCYCLOPEDIA	$23
DINOSAUR/SPACE ADVENTURE	$19
DOCTORS BOOK OF HOME REMEDIES	$25
FAMILY DOCTOR III	$24
FATTY BEAR FUN PACK	$16
FATTY BEAR BIRTHDAY SURPRISE	$17
GABRIEL KNIGHT	$39
GUINNESS DISC OF RECORDS	$24
GUS GOES TO CYBERTOWN	$29
HARD DAYS NIGHT (BEATLES)	$29
IRON HELIX	$39

UNDER A KILLING MOON
An interactive 3-D Movie that sets the standard for realism.
$77

MS GOLF
$29

FINALLY JOURNEYMAN PROJECT TURBO
$39

NOW! MAC TITLES

ANIMALS - SAN DIEGO ZOO	$29
AVIATOR	[illegible]
BEST OF MICROPROSE	$23
CANADA PHONE	$99
CRITICAL PATH	$29
DINOSOURCE	$39
BOOK OF HOME REMEDIES	$25
GROLIER ENCYC. V.6.0 (Ltd. Qty)	$69
INFO MAC IV	[illegible]
INTERACTIVE STORYTIME	$39
KING JAMES BIBLE	$29
LUCAS ARTS GAME PACK	$39
MAYO CLINIC	$39
PARENTING	$24
TOTAL BASEBALL	$24
ULTRA MAC GAMES	$39

MIDI MUSICSHOP PROFESSIONAL
$28

MS MUSICAL INSTRUMENTS
$44

EDUCATION PLATINUM - PUBLISHER PLATINUM
FONTS PLATINUM - GAMES PLATINUM
HOME & BUSINESS PLATINUM
A collection of the best educational shareware programs available. Easy to use Windows Access.
$17each / 2 or more $15 each

DAY OF THE TENTACLE
$29

RETURN TO ZORK
One of the best fully graphic interactive adventure games
$23

JUST GRANDMA AND ME	$39
KIDS ZOO/[illegible] ADVENTURE	$39
KINGS QUEST VI	$39
LAWNMOWER MAN	$29
LINUX #2 / PLUG & PLAY	$49
MARIO'S EARLY YEARS	$39
MACMILLAN DICT. CHILDREN	$29
MAGIC DEATH	$39
MAVIS BEACON TEACHES TYPE	$21
MIXED UP MOTHER GOOSE	$21
MULTIMEDIA PLATINUM	$19
NEW VIEW OF SPACE	$29
N.G. MAMMALS	$29
NIGHT OWL 13	$39
PREHISTORIA	$29
QUANTUM GATE	$39
RETURN TO ZORK	$23
SHAREWARE STUDIO IV	$19
SOFTWARE VAULT PLATINUM	$19
SPORTS BEST	$19
STAR WARS CHESS	$29
TEDDY'S BIG DAY	$39
WINDOWS PLATINUM	$19
WILLY BEAMISH	$29

MS DANGEROUS CREATURES
$48

MAD DOG McCREE 1 & 2
$39 & $49

MS ENCARTA '94
Multimedia Encyclopedia
$69

NEW ARRIVALS

COMANCHE 100 MISSIONS	$69
COMPTONS Inter Encyclo '95	$69
DIGITAL MORPH	$69
DOOM COMPANION	$39
DUNE	$29
FOREVER GROWING GARDEN	$39
KIRK'S COMIC DISK	$69
LEARNING FLY FISHING	$19
MUTANOID MATH & WORD	$39
PC SIG 13	$39
OUTPOST	$39
REBEL ASSAULT	$39
SPACE & ASTRONOMY	$39
SCIENTIFIC LIBRARY	$49
[illegible] IN STORYLAND	$29
WINES OF THE WORLD	$17
WORLD ATLAS Ver. 5	$23
WORLDS LIBRARY 171 STORIES	$19

THE ADVENTURES OF WILLIE BEAMISH
$27

ASTROLOGY SOURCE
For both Windows and Mac
$17

ULTIMATE DOMAIN
$29

WORLD FACTS
$29

CD-ROM DRIVES

PANASONIC 562 / MITSUMI Internal Cont. Included	$179
TEXEL 8 Speed Internal	$509
TOSHIBA	
3401 Internal (SCSI)	$375
3401 External (SCSI)	$499
3501 Internal 4 Speed	$499

WE STOCK SCSI
HARD DRIVES AND
SYQUEST REMOVABLE DRIVES

ANIMAL ALPHABET
$29

MARIO'S TIME MACHINE
$19

GLOBALDRIVE
THE COMPUTER STORAGE EXPERTS
MULTIMEDIA CONNECTION

NOW SHIPPING CANADA WIDE

EVERYDAY LOW PRICES – NO MEMBERSHIP REQUIRED

Prices are already cash discounted. Prices, availability subject to change without notice. Shipping and Taxes Extra.
* Applies to CD Rom Titles only

Govt., Schools, Library and Corporate PO's accepted. Quantity discounts available.

- Worry Free Warranty
- Technical Support
- Fast Delivery
- Installation Available
- Over 10 Years of Storage Experience

226 Esna Park Dr., Unit 1, Markham, Ontario L3R 1H3

NEW CHRISTMAS HOURS AS OF DECEMBER 1st, 1994
MON - FRI: 10:00am-8:00pm
SAT: 10:00am-6:00pm

Tel: 905-475-1964 Fax: 905-475-8102

NOW OPEN SUNDAYS
12 PM TO 5PM

CD-ROM Christmas Platter

Continued from page **28**

Tools
Title 3D Landscape
From Books That Work

3D Landscape is a complete landscape design utility including all the drawing tools icons and symbols you ll need Also gives techniques and tips and has a great "aging feature that shows how your gardan will look as it matures (Also available on floppies) $79 95 Other titles Design and Build Your Deck Get Wired Home Survival Toolkit are also available but on floppies only

Title Color Digital Photos 2nd Edition
From Seattle Support Group

These disks offer royalty free clip art for the serious user A series of six disks each featuring 200 magazine quality images of various subjects or concentrating on a single topic Volume (1) Premiere, (2) Space (3) Floral (4) Planes (5) Paramount and (6) Glamor These are 24-bit color images suitable for desktop publishing. All are stored as JPEG files that expand to 9 MB and print to 7 x 5 inches at 300 dpi (or 150 lpi) Windows and Macintosh. $79 95 (each)

Fascinations
Title The JFK Assassination
From Medio Multimedia

The JFK Assassination A Visual Investigation the absolutely most comprehensive package ever produced about this event (See TCP Oct 94 for full review) Windows only $59 95

Title The KGB/CIA World Factbook
From New Media Source

This is a very interesting CD-ROM Kind of like an almanac but with real genuine spy info thrown in. Government statistics, world economics political and diplomatic protocol treaties trade and even drug traffic There's lots of graphics and an easy search tool so you can cross-reference information on any or all of the 250 countries and territories in the inventory DOS Windows and Macintosh This one's just plain fun just plain useful and just plain $50

Title The People vs O.J Simpson
An Interactive Companion
From Turner Home Entertainment

I bet you ve all been wondering when this would show up. Produced by Turner Home Entertainment – as in Ted Turner the guy who thought colorizing The Maltese Falcon would be good for a few extra bucks the guy who owns CNN

So it should come as no surprise that this is basically a compilation of CNN news footage and pictures It s about as comprehensive as you can get though and it's well organized. This disk includes the files necessary to tap into CompuServe so you can keep up with the latest gossip Windows and Macintosh About $20 (street price)

New Media
Title Medio Magazine
From Medio Multimedia

Medio Magazine a new enterprise which has only published its second issue It s a CD ROM that comes out monthly and is chock a block full of news movie clips.

➤

R E B U I L T
Fuser Assemblies

Dealer parts for:
ALPS EVEREX
IBM QMS, CANON
NEC, APPLE OLIVETTI
HP BROTHER, FUJITSU, QUME
PANASONIC MANNESMAN TALLY
KYOCERA OKIDATA AND MANY MORE

Call for incredible prices on most laser printer parts!

from $79.00
with 4 month warranty

Setting new standards for price and quality

Commercial Laser Technologies (416) 633-6566

HARDWARE, SOFTWARE, ACCESSORIES AND SERVICE
It is your choice.....We have them all.....
Quality Clone or Affordable Brand Name

VESA Local Bus
4MB RAM
1.44MB Floppy
340MB Hard Drive
VLB SVGA w/ 1MB
MiniTower Case

486 DX2/66	$ 1059.00
486 DX4/100	$ 1579.00
PENTIUM 60MHz	$ 1759.00

SVGA Monitor From $ 240

Store Hours:
Mon - Fri 9:30 - 6:00
Sat 10:00 - 5:00

AST COMPUTER
Novell Gold Authorized Reseller
IBM COMPAQ Canon
HEWLETT PACKARD NEC Raven

SUPER POWER
90 MHZ PENTIUM PCI
PCI BUS
8 MB RAM
1 44 MB Floppy Drive
420 MB Hard Drive
PCI SVGA Card
PCI IDE Controller
Enhanced Keyboard
Mini Tower Case $ 2340.00
Monitor from $ 240

COMPAQ Presario 924
8Mb RAM 1.44Mb FDD 525Mb HDD, Fax Modem, Mini Tower Case Software Bundle
Special
COMPAQ Presario 510
Special

MISCELLANEOUS

DISCOVERY CD 16 KIT	$ 380.00
EDUTAINMENT CD 16 KIT	$ 525.00
SOUND BLASTER 16 BASIC	$ CALL
STEREO SPEAKER	$ 18 80
US ROBOTICS 28 8 MODEM	$ 280 00

PRINTERS

Canon 1000	Special
Canon BJC-4000	Special
HP 4	$ CALL $
HP 540	HOT!

NOTEBOOKS
AST NB 4033-28BW
$ 2,150 00
AST ASCENTIA 800N
4/33S 4/250
$ 3 012 00
COMPAQ CONTURA AERO
433C M250
[illegible]
COMPAQ CONTURA AERO
4/25 M170
[illegible]

SERVICE & SUPPORT
☑ We repair and upgrade most make of PC
☑ Authorized COMPAQ & AST service center
☑ Novell Networking
☑ Installation & Support
☑ CNE on Staff

Limited Quantity. All prices are subject to change. All prices are Cash Discounted. Offer expires December 15th 1994

5070 Dixie Road,
(N of Eglinton),
Mississauga
Tel.: (905) 602-5070

ONWARD COMPUTER

CHRISTMAS SPECIALS

SIGNATURE series... 486 Lite
- VESA Local-Bus 32 bit Main Board
- P24T LIF socket
- 128K External Cache
- 4 MB RAM @ 70ns
- SVGA Video Card 1MB
- 210 MB Hard Drive
- 1.44 MB Floppy Drive
- IDE Controller
- 2 Serial / 1 Parallel / 1 Game Port
- Mini Tower Case with 200W PS
- 14" SVGA COLOUR Monitor
- 101 Enhanced Keyboard
- 2 Year Labour & 1 Year Parts Warranty (Upgrade available, details in store)

CHRISTMAS FREE GIFT

486DX-33 $1228
486DX2-66 $1299

SIGNATURE series... 486 Platinum
- Gigabyte VL-Bus 486 Main Board
- Support Intel DX4 CPU
- 128K Cache (max. 512K)
- CPU Heat Sink & Fan
- Green Features
- 237 pins ZIF socket
- 4 MB 72 pins Memory
- 365MB Hard Drive
- 1.44 Floppy Drive
- VL-Bus Super IDE I/O Card
- S3 805 VL-Bus Video Card 1MB
- MiniTower with 200W PS
- 14" SVGA .28 NI Green Monitor
- 101 Enhanced Keyboard
- 2 Year Labour & 1 Year Parts Warranty (Upgrade available, details in store)

CHRISTMAS FREE GIFT

486DX2-66 $1399
486DX2-80 $1499
486DX4-100 $1899

Pick any item from Santa's list
- Selected CD title(s)
- Hi-Fi speakers
- Hard drive upgrade

Multimedia Bundle Special
- Panasonic Dual Speed CD ROM
- Sound Blaster 16
- Hi-Fi Speakers

Only $289

PRINTERS
Canon BJ-200e $355
Canon BJC-4000 $775
Lexmark ExecJet IIc $495
HP LaserJet 4L $945

PENTIUM SYSTEM AVAILABLE
** PLEASE CALL **

POINT OF SALE / RESTAURANT SOLUTIONS
☑ Track table availability
☑ Support dine-in/carry-out sales
☑ Support by Programmers & Accountants

Hwy#7
14th Avenue
Woodbine Avenue
STEELES Avenue

Genesis SystemHouse (Accounting/Business Automation Ctr.)
3075 14th Ave., Unit 13, Markham, Ontairo L3R 0G9 Tel.(905) 415-8088 Fax:(905) 415-7680

Autodesk 3D Studio
$695 Consumer Version
Autodesk. Authorized Dealer
Professional 3D Animation and Modelling
Full Consumer Package 2.01a with all Manuals, Disks, CD & Hardware Lock
3D Studio Version 4.0 students only $850
3D Studio Version 2.01a students only $280
3D Studio Version 4.0 full commercial CALL
UPGRADE 3D Studio Version 3 to 4
A FREE T-Shirt if you upgrade early. $395

PC to TV ENCODER
HIGH QUALITY

FLICKER-FREE & 16.7 Million Colours $275
Notebook, laptop, desktop with VGA output to TV, Colour smear filter, Supports composite and S-Video output. All cables 640 x 480 (NTSC) Flicker-Free Image in 16.7 million colours, Windows & DOS

3D STUDIO TRAINING SPECIAL
Hands-on introductory 2 Day 3D Studio animation course. Learn the basics of 3D Studio by producing your own animation sequence. Our step-by-step training will lay the groundwork for developing your 3D Studio expertise $359 Free 3D4 Training Manual

DPS Personal Animation Recorder
Output Animation from 3D Studio at 60 fields/sec. S-Video BetaCam & comp
~~$2850~~ Lowest Price!

DIGITAL VIDEO
Video Editing on PC's Hard Drive
Introducing a LOW COST Non-Linear digital video capture and playback system for VHS and S-VHS Quality on the PC! This single Carmen-mode board employs a LSI motion JPEG chip and allows Full Screen Full Motion (30FPS) Video. Complete with Video Studio and Adobe Premier for fully functional video editing and effects. The DC1 can also be used to playback and record a sequence of files from 3D Studio or other programs $995 NEW LOWER PRICE!

IC Technology
3D Studio
Animation
Targa+ Cards
PC Video
Multimedia
Video Grab
DPS-PAR
1-800-267-4743 Outside Ontario
(416)633-5884 Fax:(416)398-5484
3865 Chesswood Drive, Toronto, Ontario M3J 2R8

FULL COLOUR FRAME GRABBER
16.7 million colours, 640 X 480. No VGA feature connector, no upper memory limits, MS Windows compatible. Composite & S-VIDEO input. Works with most PC's $395

sports items business columns and travel articles Already it shines as a genuine bargain Once you get into it though a little tarnish begins to show as you quickly realize that the news is mostly old — O J Simpson Jackie Onassis *et al*, as are the movie reviews and even the Sports news hmmmm World Cup I kinda remember that

Alas another less than happy realization is that virtually all the articles are taken from the AP — that's Associated Press — wire service Which means they all have that annoying generic quality that has toppled the once omnipotent newspaper industry into the depths of innocuous — and consequently penury — hell You probably won't want to read many of these articles unless your regular sources for current events run toward Oprah, *People Magazine* or even Peltie in Prime

On the plus side, though, Medio Magazine is perfect for the Entertainment Tonight set with lots of enjoyable items in the Entertainment Scene, Coffee Break and Cultural Collage sections It's here you get the movie clips, celebrity interviews music videos and even somewhat fluffy but ultimately readable articles like "Letterman & Leno Icons for an American Germany"

Elsewhere Medio has thrown in a gallery of relatively high quality photos divided into categories like Entertainment Sports News, Culture and Sci Tech. Windows only Give a gift that keeps on giving and get a subscription for $59.95 Single copies can be had for $9.95 (both prices in $ U.S.).

Title Hitchhiking on the Information Highway
From Moon Valley Software

Touted as "the most comprehensive reference guide and communications software library available today," this is a great package for neophyte anglers on the Internet even if it's somewhat overstated Of primary interest are the narrated video simulations of how to get on-line along with instructional videos explaining telecommunications modem operation, technical tips the terms used and software features

A library provides the full texts of the books, "Internet Basics" "Zen and the Art of Internet" and "The Hitchhiker's Guide to the Internet" – all of which can be indexed and cross referenced on a single word And beefing up the literary end of the package are free issues and subscription offers to various magazines like Internet World, Multimedia World, PC Novice CD ROM World and Virtual Reality World But wait! There's more!

The included Softerm for Hitchhikers communications software identifies more than 12 000 bulletin boards that you can call right away all organizable by zip code area code and many manner of other things lots of which are toll free calls. And to make navigating the Infobahn even more attractive you get trial subscriptions to CompuServe America Online, Prodigy, GEnie and Netcom Netcruiser Once yer cookin there are utilities to regulate your modem in send and receive modes and even a meter to keep track of how long you've been on line.

Such a sophisticated set of features requires more than the usual hardware so you or your giftee will have to have on top of the usual stuff 10 megs of free HD space and a minimum 9600 baud modem. Windows Suggested price is $99.95 but you're going to find it for under $50 A real bargain!

Entertainment

Titles Screens & Wallpaper
From Seattle Support Group

Two CD-ROMs with 200 royalty free screen-resolution images on each disk. A fairly comprehensive collection of innocuous professional snaps of nature lifestyles animals plants sunsets etc They can be used as backgrounds in multimedia productions as screen savers in your Windows desktop or imported into presentation programs like PowerPoint, Persuasion and Astound Windows and Macintosh Considerable fun and value for an inconsiderable amount of dough $19.95 (each)

Title The Complete After Dark
From Berkeley Systems Inc

The After Dark screensaver phenomenon has burgeoned up to Version 3 at this point despite the fact that screensavers have long been rendered virtually redundant by modern monitor technology Still they're a good way of personalizing your impersonal machine selflessly serving humanity in much the same manner as the ubiquitous bumper sticker Now if you want the complete set of After Dark screensavers, you can have all versions to the present on a single CD-ROM But don't worry, you don't have to keep the disk perpetually loaded to use the screensavers, Berkeley has simply and smartly provided all the required files on a CD-ROM which you install over to your hard drive as usual. For Windows and Macintosh About $75 (street price)

Title Millennium Auction
From Electronic Arts

Millennium Auction the futuristic role playing, bidding buying bluffing and selling strategy game for ages 18 and up You are one of several characters bidding in the future for items from the present (i.e. Bill Clinton's saxophone) This relatively new game has already found a loyal and widespread following A good alternative to the shoot-em-ups but with equally sophisticated 3D graphics and sound. Windows. $69.95

The Millennium Auction Private Collectibles Edition an add-on theme disk for those already tired of bidding, buying, bluffing and selling the items included with the original game There are 60 new things to bid for here, including (ha ha) Margaret Thatcher's private collection of "nutcrack

Become more compatible with your computer.

The A Plus Software Seminar Series.

A Plus Software introduces a series of seminars designed to help you learn more about the world of computers These 45 minute seminars will allow you to gather important information and improve your computer skills (November's topics are highlighted below) The seminars will start on November 5, in our Vaughan, Barrie, and Kingston stores, with more stores to follow in the new year. Tickets may be purchased from the location at which you plan to attend. Only A Plus Software offers you seminars like these Because we do much more than simply sell software We're your personal software store

November's Topics

A Parent's Guide to Children's Ware

We received customer and vendor input on over 150 new children's software titles We tested these titles selected 9 outstanding new pieces of software, and prepared highlights to show you in the seminar rooms This seminar is exciting, fun and informative Bring the whole family!

This seminar is FREE.

Thursdays & Fridays (from Nov 10)
6PM-6 50PM & 7PM 7 50PM

Saturdays (from Nov 5)
11AM-11.50AM & 2PM-2 50PM

Sundays (from Nov 6)
12PM-12 50PM & 3PM-3 50PM

An Introduction to the Internet

Join us for an enlightening journey on the information superhighway How does it work? How much does it cost? How do you get connected? What can you do when you're on line? What do you need to get started?

Admission:

$25 less a $15 Coupon towards the purchase of any product at A Plus Saftware.

Saturdays (from Nov 12) **1PM 1:50PM**

Sundays (from Nov 13) **2PM-2.50PM**

PC Basics: The Information You Need to Be in Control of your Compnter

If you are a brand new computer user or are just tired and confused by wading through all those manuals this seminar is for you It is written specifically for you, the new user so don't worry about it being overly technical

Admission:

$25 less a $15 Coupon towards the purchase of any product at A Plus Software.

Saturdays (from Nov 19) **12PM-12 50PM**

Sundays (from Nov 20) **1PM 1:50PM**

Seminars will be held every week in our Vaughan, Barrie and Kingston stores.
For ticket information and availability, call us for details.

VAUGHAN
1600 Steeles Ave W
(905) 669-0557

BARRIE
411 Bayfield St N
(705) 728-8333

APLUS SOFTWARE

Your *Personal* Software Store

While quantities last. Prices in effect to Friday December 23 1994

CANADIAN OWNED & OPERATED

KINGSTON
2782 Princess St
(613) 634-3234

BOXING DAY PRICES!
VALID ONLY WITH THE PRESENTATION OF THIS ADVERTISEMENT

LOWEST PRICE 486 SX 33 SYSTEM
•4 MB 170 MB HARD DISK
•1.44 MB FD IDE & 512 KB SVGA CONTROLLER
•KEYBOARD 14" SVGA MONITOR
$999

LOWEST PRICE 486 DX2 66 SYSTEM
•INTEL DX266
•4 MB 340 MB HARD DISK
•1.44 MB FD VL IDE & VIDEO
•KEYBOARD 14" 0.28 NI MONITOR
$1299

LOWEST PRICE PENTIUM 60
•PENTIUM 60, MID TOWER
•4 MB, 420 MB HARD DISK
•1.44 MB FD VL IDE & VIDEO
•KEYBOARD 14" 0.28 NI MONITOR
$1899

LOWEST PRICE PENTIUM 90 PCI
•PENTIUM 90, MID TOWER
•8 MB 540 MB HARD DISK
•1.44 MB FD PCI IDE & VIDEO
•KEYBOARD 14" 0.28 NI MONITOR
$2699

HOT Holiday Gifts!
DIGIT SCHOOL HOUSE (20 Games) $309
SOUND BLASTER MCD $129
SOUND BLASTER16 + MITSUMI 2X CDROM $279
SOUND BLASTER COMPATIBLE + SONY OEM 2X CDROM $239
GAME PLAYER TV VGA TO TV ADAPTOR $199
ENCARTA 95/94 $79.99/$59.99
MS WORK + MONEY $79.99
MS GOLF / MUSIC INSTRUMENT $45.99/$45.99
MS OFFICE CD $250
ATI MACH 32 1MB $139
ATI MACH 64 2MB DRAM $279
1414 INTERNAL FAX MODEM $99
15" VESA MPRII POWER SAVING $449
17" 0.26 VESA MPRII POWER SAVING $899
TRADE IN YOUR 120 MB FOR A 360 MB $180
TRADE IN YOUR 210 MB FOR A 540 MB $220

PRINTERS
CANON BJ100 $309 HP540 $409
CANON BJ4000 $699 HP560C $679
CANON LBP430 $759 RAVEN LP410 (1.5MB) $589

SOFTWARE TRADE INs 80% OFF
• Call for details •

	NEW	USED	TRADE IN
DOOM II	$69.99	$57.99	$49
UNICOM	$69	$59	$49
ID CAD	$69	$40	$30
SIMCITY2000	$69.99	$46.99	38.99
STACKER 4.0	$169.99	$139.99	$110.99
MS OFFICE	$899	1386	$329

Final price subject to change without notice.
*Prices quoted are Cash Discounted.

COMPUTER TOWER
2050 Kennedy Rd., Unit 6, Scarborough. OPEN SUNDAYS
Conveniently located at 401 & Kennedy Rd.
MON. CLOSED TUE-FRI. NOON-8:00PM
SAT-SUN: NOON-6:30PM
(416) 292 • 8693

SUPER IDEAL SYSTEMS FOR STUDENTS. YOU PAY LESS
386DX-40 (2M Ram) $955
486DX2-66 (4M Ram) $1210
486DX-33 (4M Ram) $1230
486DX2-50 (4M Ram) $1250
486DX2-66 (4M Ram) $1320
* 128K CACHE
* 210 MB HARD DRIVE
* 1.44MB FLOPPY DRIVE
* IDE I/O (2S, 1P, 1G)
* SVGA CARD (512K)
* 14" .28 NI SVGA MONITOR
* MINI TOWER CASE/230W
* 101 KEYBOARD
* MOUSE / PAD

SUPER WORKSTATION
PENTIUM 90 (512k/8M) $2750
PENTIUM 66 (512k/8M) $2535
PENTIUM 60 (512k/8M) $2380
486DX2 66 (256K/4M) $1545
* INTEL CPU
* GREEN MAIN BOARD
* 3F / 3 3V/5 5V
* 420 MB HARD DRIVE
* 1.44 MB & 1.2 MB F.D.
* IDE I/O (2S, 1P, 1G)
* VGA CARD (1M)
MINI TOWER CASE/230W
* 101 KEYBOARD
* MOUSE / PAD
* 14" .28 SVGA MONITOR NI / GREEN

UPGRADE TO MULTIMEDIA
* DOUBLE SPEED CD-ROM DRIVE
* SOUND CARD, SPEAKERS
ONLY $285

* PENTIUM 60/66 PCI 512K MOTHER BOARD $370
* RAM & CPU CALL
* ATI MACH64 EXPRESS, 2 Mb $266
* ATI MACH64 WIN TURBO (2 Mb) $379
* TRIDENT (1M) SVGA CARD $80
* IDE VLB I/O (2S, 1P, 1G) $36

— *** BLOW OUT *** —
* 340 MB HARD DRIVE $240
* 420 MB HARD DRIVE $260
* 540 MB HARD DRIVE $336
* 1.3 GB HARD DRIVE (SCSI) $610
* TRIDENT 9400 (1M) VLB SVGA CARD $69
* S3 VLB (1M) SVGA CARD $99
* 486DX VLB GREEN/256K/8M/320M/1.44 KEY $1130
* 14" .28 NI LR PS GREEN SVGA MONITOR $429
— WHAT ARE YOU WAITING FOR ? —

* 250 MB TAPE BACKUP DRIVE INT. $215
* SOUND BLASTER 16 MCD $130
* MOMENTUM 14.4/14.4 FAX/MODEM $95
* USR 14.4/14.4 FAX/MODEM $150
* PRINTER/LASER/DOT MATRIX CALL

SYSTEM UPGRADING, NETWORKING, SOFTWARE, FUZZY LOGIC, NEURAL NETWORK, AND SO MANY! PLEASE CALL AND CHECK.
TEL: (905) 475-9921 FAX: (905) 475-5350

ICCT TECHNOLOGIES (CANADA) INC
500 ALDEN ROAD, #205 MARKHAM, ONT L3R 5H5
TEL: (905) 475-9921 FAX: 475-5350

VESA Local Bus Systems
486SX-25 $1099
486SX-33 $1129
486DX-33 $1199
486DX-40 $1249
486DX-50 $1419
486DXII-66 $1299
PENTIUM Call for Detail
Upgrade While You Wait
Novell Network Services
All Systems include:
128k cache
4 MB RAM
1.44 MB Floppy Drive
170 MB Hard Drive
14" SVGA Monitor
SVGA Card
IDE Controller Card
101 Keyboard
3 Button Mouse
Mini Tower Case
Mon.-Sat. 10:00am - 8:00pm

Grand Opening Special Items
Monitors
Daytek 14" SVGA NI .28 dp $289
Daytek 15" SVGA NI .28 dp $410
Hard Drives
Conner 340 MB $209
Maxtor 546 MB $319
CD-ROM
Panasonic 562 2X w/ Creative Sound Blaster 16 $269
ICD 220 2X w/ OAK Sound Blaster 16 $229
Fax / Modem
14 400 Internal $85
Many more items are available, phone for detail

GOLDEN ROC Computer Systems Ltd.
1554 Davenport Rd, Toronto, Ont. M6H 2J1
Tel: (416) 651-8239 Fax (416) 651-2982

CHRISTMAS SPECIALS
3T
2000's TECHNOLOGY INC. (3T)
(416) 502-2055
1-800-520-0066
250 Consumers Rd.
North York
Ontario
Located Conveniently @ 401 & 404

SPECIAL!
486DXII-66 $1799
Complete Multimedia System with 14.4 Fax/Modem
2 year parts & 5 year labour warranty
486DXII-66 Intel CPU, Math co-processor
VESA LB Mother Board, Expandable
128K External Cache
340 MB IDE Hard Drive
4MB 70 Nsc. RAM
1.44 MB 3.5" floppy
1 MB Graphic Card VESA
14" SVGA Monitor
2 Serial/1 Parallel/1 Game port
101 Enhanced keyboard
14.4 Internal Fax/Modem
Dual Speed CD-ROM
16 Bit Sound card
Speakers & Microphone
Mini Tower case with 220 watts
CSA approved Power Supply
MS-Mouse & Pad MS Compatible
While quantity last

3T Pentium Systems
Pentium 60/66/90
$2,690/$3,280/$3,590
512K External Cache
540MB 13Ms. IDE Hard Drive
PCI, IDE Controller
16MB Memory expandable to 128MB
1.44 & 1.2 MB floppy drives
1 MB, PCI Graphic Card
2 Serial/1 Parallel/1 Game port
102 enhanced keyboard
Mini Tower case & 230 watts Power Supply
Pentium cooling fan
5 Year labour & 2 year parts warranty
17" MAG Monitor $995
15" MAG Monitor $525

An Authorized dealer of HP products carrying the full line of HP printers, Scanners, Printer supplies and
HEWLETT PACKARD
An Authorized dealer of digital products carrying full line of DEC products including Systems, Networking solutions, Notebooks, Printers.
digital

Lease to own program from $9.00 per week
2000's Technology provides total solutions including high quality products from HP, Digital, 3T, software setup, networking, computer upgrade and on-site services,
Government and company purchase orders are welcome

ers." Count Dracula's hand mirror, the Marquis de Sade's personal collection of whips and chains and Timothy Leary's personal collection of drug paraphernalia. Windows $29.95

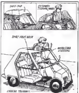
Title Trump, New York
From CreativeMinds Inc

This monopoly style computer game is for the avaricious capitalist with a CD ROM. Donald Trump gave permission for use of his name and he's even featured as a billionaire who promises to resign his empire to the person who makes the most money out of real estate speculation. Sounds like a stretch. No price available at press time. ❑

Contacts

Berkeley Systems Inc.	(510) 540-5535 #204
Books That Work	1-800-242-4546
Compton's New Media	(619) 929-2626
CreativeMinds Inc	(213) 934-3380
Culinary Concepts	(303) 939-8130
Decis Knowledge Research Inc	1-800-567-4321 or 416-250-6537
Electronic Arts/ EA*Kids	1-800-245-4525
Gold Standard Multimedia Inc	(904) 373-1100
Great Bear Software	1-800-795-4325
Grolier Electronic Publishing	(203) 797-3500
GTE Entertainment	(619) 431-8755
MSRP	N/A at press time
Individual Software	1 800-822 3522
Knowledge Adventure Inc.	(818) 542-4200
Medio Multimedia	(206) 867 5500
Microsoft Canada Inc	(905) 568-0434
Moon Valley Software	1-800-473-5509
New Media Source	1-800-344 2621
Palo/Haklar Multimedia	(213) 481-0952
Seattle Support Group	(206) 395-1487
The Software Toolworks	(415) 883-3009
Soleil Software Inc	(415) 494-0114
Swfte International	(302) 234-1740 #220
Turner Home Entertainment	(404) 827 2880
World Library Inc.	(714) 748-7197

Sightings Steven M Johnson



A car by Tread-Mission of Hollywood is the latest addition to a growing collection of electric cars designed for Californians. Drivers work out on the treadmill as they drive, generating a small amount of electricity.

NEWSBYTE

Atari & Sega In Video Game Deal

NB — Long-time battling giants of the video game world, Atari (AMEX:ATC) and Sega, have put the sword away for the pen. The two companies have announced an extensive agreement to release all claims against each other, complete a stock purchase, exchange certain technologies, and jointly license agreements to develop games for each company's present and future platforms.

As part of the agreement, Sega intends to purchase approximately 4.7 million shares of Atari common stock for a price of US$40 million dollars. The entire agreement is subject to approval by the United States Department of Justice and the Federal Trade Commission.

Newsbytes notes Atari posted a $48.9 million dollar loss against sales of $28.8 million in 1993. The company attributed the losses to the end of a technology era and the beginning of a new one with its 64-bit Jaguar platform.

As part of that comeback, Atari has announced Alien Vs. Predator for the Jaguar platform. This new game is intended to take over the leading position of the infamous Mortal Kombat II.

While both companies are dropping all legal claims against the other, Atari is dismissing a $90 million lawsuit against what will now be a strong stockholder in its company.

As part of the announced technology exchange, Sega will receive worldwide, non-exclusive rights, with certain exceptions, to Atari's library of patents. For more than 70 US patents and applications Atari will receive $50 million, less its attorney fees and costs, as a prepaid royalty.

Speaking to Newsbytes, Sam Tramiel, spokesperson for Atari, said: "We have never had a bad relationship with Sega and we have always kept a talking relationship. During the current suit, we decided to sit down and mediate a settlement. This announcement came out of those meetings. We are very pleased to create this new era of our relations with Sega."

Tramiel continued: "The agreement to produce titles for each other's platforms means that we will license up to five titles each year from Sega, which we will develop on the Jaguar platform. Sega will have the same option to license up to five of our titles for production on their platform."

Atari said its list of Jaguar titles is expected to reach 30 by Christmas and it will begin shipping the Jaguar version of Doom late this month. ❑

Contact: Atari 408-745-8624

Express "VESA"/"PCI" DX2-66
Max. 192MB / 512K Cache

Express "PCI+EISA" Dual Pentium 90/100
Max. 768MB / 512K Cache

Express "PCI+EISA" Pentium 90/100
Max. 192MB / 512K Cache

Express "PCI+ISA" Pentium 90/100
Max. 768MB / 512K Cache

Express "PCI+EISA" Pentium 60/66
Max. 192MB / 512K Cache

Express "VESA+ISA" Pentium 60/66 DX2/DX4 66/80/100
Max. 128MB / 512K Cache

Express "VESA+EISA" DX2/DX4 66/80/100
Max. 256MB / 1MB Cache

Express "VESA+ISA" Pentium 60/66
Max. 192MB / 1MB Cache

Express "VESA+EISA" DX2/DX4 66/80/100
Max. 192MB / 512K Cache

Express Multimedia Notebook
VESA DX4-100
- 486 SX/DX/DX2 up to 100MHz
- 4MB memory exp. to 36 MB
- 3.5" FDD, Remov. 210/340/520M HD
- 1MB VL VGA Windows Accelerator
- 9.4" Mono or Dual-Scan color LCD
- PCMCIA 2.0 (2xType II or 1x Type I)
- Built-in sound card, speaker & mic.
- Centre-position trackball
- Smart power management
- 2-hour fast AC/DC charger
- Long-life Memory hydride battery
- 6.2 / 6.5 lbs weight

Matsushita Optical Drive
- 3.5" 230MB Magneto Rewriteable
- 5.25" 1.5GB Phase Change Rewrit.
- Embedded SCSI 2 interface

Matsushita Optical Disk Autochanger
- 30/42/75GB Optical Storage
- Best for Servers, Imaging Storage

All ViewSonic and OptiQuest monitors come with a 3 year parts & labour warranty with Express Micro system

Authorized Dealers

Distributed by
Advance-Interface Electronic Inc
Dealers Enquiries Welcome

All logos and products are trademarks or registered trademarks of their respective companies.

Christmas Gift Wrap-Up Of Gaming Software And Peripherals

BY GORDON GOBLE

Ho, Ho, Ho! Merry Christmas, boys and girls, computer hackers, gameplayers, and even you grown up boys and girls who just want to go on playing games and being kids forever and ever and ever! And an extra big greeting to my special little billionaire friend, Billy. This is Santa Claus, and I'm hoping you've all been good the whole year long. Ho, ho, ho! Santa has lots of wonderful gift ideas for you this Christmas: wonderful inventions and amazing new playthings that will make any computer gameplayer wide eyed on Christmas morning. I've got some great new programs, all sorts of joysticks, input devices, stocking stuffers, and even some computer clothing for those extremely obsessed boys and girls! Ho, ho, ho!

The elves have been working extra hard this year, and they've made a list of the really good computer toys and given it to our staff writer elf. He's the one responsible for the rest of this article, so don't come asking me any questions. Ho, ho, ho! Read and enjoy! Oh, and by the way, for you bad little boys and girls who try to search and destroy Santa's house with their Falcon 3.0 fighter jets, and for those really, really naughty little virus writers, Santa has a special gift for you. But you'll have to wait 'til Christmas Eve for that! Just make sure you're home when Santa gets there! Ho, ho, ho!

Santa's Software List

Day Of The Tentacle

by LucasArts

LucasArts created quite a sensation when, in 1987, they released "Maniac Mansion." One of the first "point and click" adventure games, Mansion chronicled the tribulations of a bunch of kids attempting to save one of their own from the evil clutches of a certain Dr. Fred Edison. A marginally crazed scientist, Edison inhabited the bizarre "house on the hill," and still does in this, a completely refurbished and technically tweaked sequel to the game that spawned a TV show.

Day of the Tentacle offers a skewed, cartoonish view on life, and its wild, riotous graphics are just one of the elements that makes DOTT one of the most enjoyable adventure games ever devised. This time, Dr. Fred

➤

ACM COMPUTER SYSTEM
4800 Sheppard Ave. East, Unit 109
Scarb., ON M1S 4N5 (East of McCowan, North of 401)
Tel (416) 298-6646
Fax (416) 298-6302

MULTIMEDIA

Creative Labs Multimedia Bundles
Discovery 16 $335 Digital School House $379 Edutainment 16 $589

Creative Labs True 16 bit Sound Cards
SB16 OEM $109 SB16MCD OEM $125 SB16SCSI2-ASP $289

Media Vision Multimedia Packs
Deluxe Version $315 • 6 of Today's Hottest CD Titles
Family Deluxe Version $345 • 9 of Today's Hottest CD Titles
Plus the standard hardware
• Double Speed CD-ROM Kodak Photo & Multi-session ready
• Award Winning Pro Audio Spectrum 16 bit Sound Card
• 3-inch magnetically shielded speakers

Customize your own Multimedia Kit
Panasonic or Mitsumi 2X Speed CD-ROM $169
Sony CDU 55E IDE 2X Speed CD-ROM $199
Panasonic or Mitsumi 2X CD-ROM + Zoltrix 1600 Sound $239
Panasonic or Mitsumi 2X CD-ROM + SB16 OEM $299
Toshiba Quad Speed SCSI CD-ROM (150ms, 600KB/S) $489
— Many CD Titles Education, Games Business in Stock —

HEWLETT PACKARD
Authorized Retailer

HP Printers
Deskjet 540 Ink Jet Colour Upgradable * $415
Deskjet 560C Ink Jet $689
Deskjet 320 Portable Ink Jet * $445
LaserJet 4L 300dpi Laser ($50 Rebate) $899
LaserJet 4P 600dpi Laser $1349
Deskjet 1200C w/ Postscript $2989
* Colour Upgrade kit for HP540,320 $59

Canon Printers
BJ-10SXFW $299
BJ 100 Printer - NEW $315
BJ-200e Bubble Jet $335
BJC-4000 Colour NEW 720x360 dpi $725
LBP-430 Laser 300dpi 1 Meg $799

Pre-Christmas '94 SUPER SPECIAL
486DX2-66 System Only $1,349
• INTEL 486DX2-66 CPU w/ Fan
• Vesa LB MB w/ P24T Socket
• 128K Cache
• 4 Meg Ram
• 420 Meg IDE Hard Drive
• 1.44M Floppy Drive
• 14" SVGA 0.28dp Non Int. Monitor
• Vesa Local Bus Window Accelerator 1M
• Super IDE I/O (2S 1P 1G)
• Mini Tower Case w/ 220W PS w/ Display
• 101 Enhanced Keyboard & Comp. Mouse
• 2 Years Labour & 1 Year Parts Warranty

486DX2-66 High End System $1,629
• INTEL 486DX2-66 CPU w/ CPU Fan
• VLB DX-4 Upgradable MB ZIF Socket
• Green MB w/ 256K Cache
• 4 Meg 72Pin Memory • 1.44M Floppy
• 14" 0.28 NI 70Hz 1024x768 Monitor
• Microsoft Dos 6.22
• VLB Enhanced IDE I/O
• VLB 1M Video Upgradable to 2M
• Mid Tower Case w/ 230W PS
• 540 Meg IDE Hard Drive
• 101 Keyboard & Comp. Mouse
• 2 Yrs Labour & 1 Yr Parts Wty

ASUS 486DX2-66 PCI System $1,795
• INTEL 486DX2-66 CPU w/ CPU Fan
• ASUS PCI MB w/ Enhanced IDE on-board
• 256K Cache • 1.44M Floppy Drive
• 4 Meg 72Pin Memory (Max 128 Meg)
• 14" 0.28 NI 70Hz 1024x768 Monitor
• Microsoft Dos 6.22
• VLB IDE I/O (2x16550S/1P 1G)
• ATI 1 Meg PCI Video (Max 2M)
• Mid Tower Case w/ 230W PS
• Western Digital 540 Meg HD
• 101 Keyboard & Comp. Mouse
• 2 Yrs Labour & 1 Yr Parts Wty

INTEL Pentium 90MHz-PCI System $3,035
• INTEL Pentium CPU w/ Fan
• INTEL PCI MB w/ Intel Chipset
• 256K Cache—Enhanced IDE on-board
• PCI IDE I/O w/ 2x16550S & 1 Parallel
• 4 ISA, 3 PCI slots
• 15" 0.28 NI LowRad SVGA Monitor
• 8 MB RAM, Max 128MB
• 540 Meg IDE Hard Drive
• 1.44M Floppy Drive
• ATI WinBoost Mach64 PCI 2 Meg
• 101 Keyboard & Comp. Mouse
• Mid Tower Case w/ 230W PS
Pentium 60MHz PCI System $2,649 Pentium 66Mhz PCI System $2,800

Multimedia 486DX2-66MHz- System $1,885
• INTEL 486DX2-66Mhz CPU w/ Fan
• 4 Meg Ram 128K Cache
• 420 Meg IDE HD & 1.44M Floppy
• 14" SVGA 0.28 NI Monitor
• VLB 1 Meg Video Card (Max 2M)
• VLB IDE I/O Card (2S/1P/1G)
• 2X Speed CD ROM
• Sound Blaster 16 bit sound card
• 4W Amplified Computer Speakers
• Mid Tower Case, 101 KB & Mouse
• CDs MS Encarta, Works & Money
• Microsoft Dos 6.22 & Windows 3.1

Motherboards & CPUs Speed up your 386s
Intel 486DX2-66 on VLB DX4 Upg MB-128K $399
Intel 486DX2-66 on ASUS VLB/PCI MB-128K $439/499

Monitors & Video Cards
Daytek 15" 0.28 LR NI Digital Monitor $449
Sony 15SF1 0.25 1280x1024 NI LR ES $625
Viewsonic 15 15" 0.27 1280x1024 NI LR ES $625
CTX 1760M 0.27 17" 1280x1024 NI LR ES $899
Samsung 17GLs 0.26 - PC Magazine #1 $1169
ATI Ultra Plus Mach32 1 Meg DRAM (Max 2M) $155
ATI Win Boost Mach64 2MB DRAM OEM $275
ATI Win Turbo Mach64 2 MB VRAM OEM $379

Storage Components
Samsung/Conner 420 Meg HD $249/$265
Maxtor Quantum/WD 540 Meg HD $309/$349
WD 730 Meg /1.9GB Enhanced IDE HD $459/$689
Conner 250/420 Tape Backup - Free Tape $215/$275
Colorado Jumbo Trakker 250/700 Meg $389/$699
CMD Enhanced IDE I/O upto 10M/s $69

APC Uninterruptable Power Supply
Backup UPS 280/400/600 $159/245/399
Smart UPS 400/600/900 $375/449/685

Scanners HP & Microtek Authorized Dealers
Logitech 256 Grayscale w/ OCR $215
HP IIp Flatbed Mono 300dpi $629
HP IICX Flatbed - Colour 400dpi $1349
Microtek II HR - 600x1200dpi $1549

Fax Modems Int. Ext.
Hayes/Practical Peripherals 14.4 $145 $175
Zoltrix 14.4/28.8 $82/$165
Boca 28.8 V.Fast $199 $249
GVC 28.8 V.Fast $255 $275
USR 28.8 V.34 $315 $345
16550 Uart Serial-1S / 2S&1P $29/$49

Looking to upgrade your system - Free Estimates
Installation of any computer hardware-Reasonable Price
Note. All Prices are cash discounted. M/C or Visa, add 3%
Prices & Availability Subject to Change without Notice.

MEMBER OF BETTER BUSINESS BUREAU

• System Upgrades, POS Accounting Systems Setups, Network Installations, Software, Books Available • Hours: M-F: 9:30-8:00 Sat: 9:30-6:00 Sun: 11:00-4:00

has had one of his more interesting creations a purple tentacle to be precise – escape the mansion and set out to conquer the world! It's up to the gameplayer controlling the actions of three bemused teenage kids to save the world from the tentacled terror.

DOTT separates itself from other adventure games in that it never makes use of gory violence in the course of problem solving nor does it allow the gamer to make an unrecoverable error. The program uses approximately 15 MB of hard drive space and requires only 570K memory for error free operation. DOTT is a wholly revamped Maniac Mansion both visually and audibly (and it even contains a fully functional version of the original Mansion within its confines!)

Master Of Orion

by Microprose

There are a number of space-adventure games currently on the market that, albeit graphical masterpieces, feature little in the way of substance. An equal number of like minded programs put the gamer into the boots of a mindless space cowboy blasting everything that moves. But in "Master of Orion," Sim Tex Software and Microprose have developed a space adventure game that accentuates the gamer's strategy and logistics, not the resources of one's computer or quick trigger fingers. It is a welcome departure.

Thankfully, MOO is not bereft of some stunning visual touches as well as a little conquest on a planetary scale. The object of the procedure is, after all, to "develop resources and design ships for your alien population to colonize nearby galaxies." But in MOO you must be a thinking, intelligent leader above all else as building and expanding an entire civilization are the primary goals in this thought provoking product.

Master of Orion will usurp about 14 MB of hard drive space and requires both 575K of conventional memory and 2MB RAM. A sound card and mouse are highly recommended. This highly rated Microprose offering brings a mind filling galaxy of possibilities and months of playing time to those who like some smarts served with their plasma torpedoes.

Falcon Gold

by Spectrum Holobyte

This Christmas there's really no better place for serious desktop jet jocks to turn than the latest software package from Spectrum Holobyte "Falcon Gold." On just a single compact disc computer pilots will find four of the best jetfighting simulations of the last three years: "Falcon 3.0," "MiG 29," "Hornet Naval Strike Fighter," and "Operation Fighting Tiger." As a bonus, Falcon Gold also includes the "Art of the Kill" video, a live action dogfighter trainer for those wanting to improve their air to air prowess. The entire package will cost little more than any one of the individual games.

With ultra realistic flight models and a veritable cornucopia of keyboard functions that duplicate most real life cockpit operations, each game in the Falcon Gold collection is directed at gameplayers willing to take the time and effort to learn every aspect of jetfighting, from take-off to landing and all things in between. Needless to say, interested parties must have a CD ROM drive and they also must have a ton of available memory (618,496 bytes to be exact) and 25 MB of disk space if Falcon Gold is played from the hard drive or 11 MB if played from CD. True Falcon enthusiasts will also be found with numerous alternative input devices such as authentic recreations of cockpit flightsticks and programmable control systems (more on such apparatus later) while the hopelessly demented will have entire cockpits at their disposal. Such are the effects of prolonged exposure to the amazing programs that make up the Falcon line.

NASCAR Racing

by Papyrus

Due on store shelves by the time you read this, Papyrus Publishing's "NASCAR Racing," chronicling the exploits of the bulbous roaring stock car, will be the most advanced racing simulation ever to hit cyber pavement. There's a lot of great stuff here, with the most startling development coming from

NASCAR's awesome graphical abilities – never has a racing simulation looked this good. At 640 x 480 resolution NASCAR will make everything else look "ragged" or primitive by comparison.

Behind the wheel, racers will feel the real deal as though they are in control of a muscular 3500 lb car with very little downforce ➤

INTRODUCING

MULTIMEDIA STACKER.®

THE POWER TO

LAUNCH MORE GAMES.

You slide into the cockpit, ease the throttle forward, and prepare for an old-fashioned dogfight. Suddenly, you come to a grinding halt. What? Not enough disk space or RAM?

Well, don't surrender those controls quite yet. Because StackerMan is here with new Multimedia Stacker®—the easiest way to more than double your hard disk capacity and give your system a big boost in RAM.

Not only is Multimedia Stacker optimized for speed on multimedia systems, but it gives you the most disk space you can get.

And it also comes with a free copy of Multimedia Cloaking,™ a new technology from Helix Software that frees up memory by moving system drivers to a 32 bit protected area. So your games have more room to run.

Multimedia Stacker is available on disk or CD-ROM and can be found wherever you see the StackerMan display. Current Stacker users call **1-800-668-9434** to cross-grade.

So get Multimedia Stacker. Because without it, you're grounded. Mister.

Stac

"GROUNDED BY RAM AND DISK SPACE PROBLEMS? STACKERMAN READS YOU LOUD AND CLEAR!"

A PLUS SOFTWARE • CLUB BIZ • SOFT OPTIONS • COMPUSMART • DOPPLER • FUTURE SHOP • INLY SYSTEMS
LONDON DRUGS • FAX-ON-DEMAND INFORMATION (USA) 619-431-8585

In the U.S.A. call 1-619-794-4333 for more information.
© 1994, Stac Electronics. Stac and Stacker are registered trademarks of Stac Electronics. Multimedia Cloaking is a trademark of Helix Software. Actual compression results may vary

LYLYSS COMPUTER & ELECTRONICS
311 Dundas St. W. (West of Keele St.) Tel: 416-766-8934 Fax: 416-766-0002

BOARDS + CPUs & MEMORY
486DX33 AMD/INTEL $271/299
486DX2-66 AMD/INTEL $349/379
PENTIUM 66M $1079
4M RAM 72 PIN $196
HARD DRIVES
MAXTOR 340MB $249
MAXTOR 420MB $279
MAXTOR 540MB $339
FLOPPY DRIVES
PANASONIC/SONY 1.2M $57
PANASONIC/SONY 1.44M $45
VIDEO & I/O CARDS
SUPER IDE ISA BUS $17
SUPER IDE VLBUS $24
CIR LOGIC 5428 1M PCI $149
CIR LOGIC 5428 1M VLB $165
S3 SUPER FAST 1M VESA $129
S3 SUPER FAST 1M PCI $179
ATI 1M PCI $149
TRIDENT 9400 1M VLB $99
PRINTERS
PAN 24 PIN $221
CANON BJ 10 ..... $259
CANON BJ 200 ..... $359
CANON BJC600 ..... $709
KEYBOARDS & MOUSES
BAWOO 101 ..... $24
KEYTRONIC $49
NORTHGATE $129
3 BUT MOUSE $10
MICRO MOUSE $35
MONITORS
14" 0.28 NI $299
15" 0.28 LVGA $459
17" 0.26 LVGA $899
MODEM
ZOLTRIX 14.4 ..... $99
USR 14.4 ..... $159
MULTIMEDIAS
SBLASTER 16 ..... $135
CD ROM 2 SPD $199
SPEAKER SW $20

486DX2-66
ONLY $1375
PLEASE CALL FOR MORE SPECIAL PRICING

Are you?
COMPUTERS
Do you want to be?

Puzzled? Confused? HAVE YOU READ ALL THE ADDS? STILL DON'T KNOW WHICH COMPUTER TO BUY OR WHO WILL TEACH YOU HOW TO USE IT? COME ON IN TO TOTAL COMPUTER SERVICES AND SEE OUR IMPRESSIVE LINE OF COMPUTER SYSTEMS, AT HARD TO BEAT PRICES. BRING IN YOUR QUESTIONS AND WE'LL HAVE A COFFEE AND DISCUSS YOUR NEEDS, ANSWER YOUR QUESTIONS, AND COME UP WITH The Best Deal For You!!

486 A Complete System for only ... $1395
OR $49 mthly on our instant credit plan!!

** PUT 20% DOWN USING EITHER VISA OR MASTERCARD AND THE BALANCE IS AUTOMATICALLY APPROVED! - NO CREDIT CHECK REQUIRED!!

Come and see us for your upgrade needs!!

Total Computer Services
(416) 439-7795
842 Markham Road (at Painted Post)
Hours: Mon - Fri 10 am - 8 pm
Sat. 10 am - 5pm
Sun. Closed-Playing with our own computers.

while they draft and bump with the competition (and that competition may be human via the modem play option). Bump a little too hard, and fenders will dent, hoods will buckle and assorted car parts will fall off.

On the downside (doesn't there always seem to be one?) high resolution NASCAR will be available only on CD ROM and desk-bound drivers will need at least a double spin drive and a 486-66 with 8 MB RAM to produce anything resembling a fluid frame rate. A low res version a la IndyCar Racing will also be shipping, but be forewarned that a 486-33 isn't enough to run even this poor man's version properly.

Epic Pinball
by Epic MegaGames

Twenty years ago, the venerable pinball game was slowly pushed from pool halls, bars, arcades and other places of ill repute by the onslaught of a new form of entertainment, the video game. So it is only fitting that pinball returns to us in its new incarnation inside a video (or more precisely, computer) game.

Epic MegaGames "Epic Pinball" is a glorious digital tribute to those days of yesteryear when pinball was king and men did not eat quiche. It's pinball with some new twists and treats, but the true-to-life actions of the ball, paddles, and board are the stars of this show and it really makes one sit and wonder just how these guys were able to translate the entire pinball experience to screen with such authenticity.

The first board of Epic Pinball is considered "shareware" and therefore can be purchased with a minimum of financial distress, and is available for downloading through numerous bulletin boards. Epic believes, of course, that once gameplayers test drive the first installment, they will be more than willing to pay fair market prices for the full product. In this matter, Epic made a very smart decision.

Allie's Playhouse
by Opcode Interactive

Christmas loves children, and children love Christmas, so would any Christmas gift list be complete without at least one offering for the chronologically challenged? Recommended for kids three to eight years of age, "Allie's Playhouse" is an overflowing bundle of activities that should keep young minds entertained and constructively occupied.

Allie (an accommodating green antennae-bearing alien with horns where his nose and ears should be) owns a way cool playhouse and children have the run of this exciting and stimulating lair. Strewn with colorful toys and accessories, Allie's playhouse is a child's dream come true. Cupboards open and close, little fishies scoot about in their aquariums, light switches work, and even when the program sits dormant, it emits various sounds and words at irregular intervals. Selecting certain objects will take the young computer nerd to any one of sixteen secondary screens, where recognitive, perceptive, and deductive skills are tested and educational games played. Coloring, learning about clocks and time, music lessons and sing-alongs are just part of the proceedings.

Allie's Playhouse permits kids to operate and explore at their own pace without a knowledge of computer skills or even the English language, just an ability to move and click a mouse. Real children's voices replace traditional "Help" files, and access to each area is object oriented. This is an award winning program that in itself helps to justify the existence of computers.

IndyCar Circuits Expansion Pack
by Papyrus

Upon its 1993 release, IndyCar Racing set the racing world on fire. 1994's IndyCar Circuits Expansion Pack contains seven more tracks (including a beautiful rendition of the Pacific Place course in Vancouver and the vast homage to speed that is Burke Lakefront Airport in Cleveland), a replay editor, print utility, modem play revisions, and a nifty car paint utility that allows you to adorn your machine with any color or logo you like. That the car paint utility has permitted this reviewer to graphically depict what some might consider a wheeled moral outrage, then race said beast against mortal enemies through a phone line, then print the results, makes the entire IndyCar exercise a whole lot better.

NHL Hockey 95
by Electronic Arts

Currently the best hockey simulator available for the PC crowd, NHL Hockey 95 updates and upgrades last year's model, NHL Hockey. Cyber pucksters will act as general manager, coach, and player as they attempt to skate circles around the best (and worst... can you say "Senators?") that the NHL has to offer.

➤

KILOBYTES COMPUTERS INC. 402-1650 or 856-7166

COMPAQ® 486/DX2/66 Microprocessor
- 420meg Hard Disk, 1 meg VRAM expandable to 2meg
- 8meg RAM expandable to 100meg, 14.4K bps Fax/Modem
- CD Sound system (dual speed CD-ROM) - 16 bit stereo sound
- Presario Multimedia 14" Colour Monitor

Phone-Center
Built-in full duplex speakerphone for natural hand free conversations up to ten private voice mailboxes with remote access, telephone answering, address book, speed dial and caller ID (when activated by local phone company)
Plus hundreds of dollars worth of pre-installed and multimedia software (please call for list)
Lifetime toll-free technical support 24 hours, 7 days a week
3 years limited warranty. Certain options are covered 1 year

Multi-Media

SINCE 1989

Hewlett-Packard
Great performance doesn't have to be expensive... the features just keeps growing. Complete, simple and affordable
HEWLETT PACKARD Authorized Retailer

HP DeskJet 540
- Affordable high-quality 600 x 300 dpi
- Exclusive ColorSmart Technology
- Works with an extensive range of DOS and Windows applications
- 3 year warranty

PENTIUM UPGRADEABLE! BEST WISHES FOR THE SEASON HP...FOR QUALITY, RELIABILITY AND VALUE!

NEW WORDPERFECT 6.1 FOR WINDOWS

New PerfectSense™ technology actually makes sense of your words. So it can do things LIKE REWRITE SENTENCES. Because new WordPerfect can read, it improves the way you write.

Most word processors are pretty simple. You type, they put letters on a screen.

But now there's PerfectSense™. An amazing new technology that allows WordPerfect® to make sense of what you write. In other words, it reads. Quite simply, it'll make you a better writer.

Take our exclusive new grammar checker—Grammatik® 6.

Any word processor can write. Only WordPerfect can read.

It's the smartest and most useful ever. Instead of just offering grammar "advice," it can actually rewrite entire sentences for you. And because it understands your words and their context, it catches more mistakes.

It can rewriting your sentences for you.

Replace

It can rewrite your sentences for you.

PerfectFit
with PerfectOffice

What's more, PerfectSense lets you find and replace all the different "forms" of a word simultaneously. For instance, change "go," "goes" and "gone" to "fly," "flies" and "flown" at the touch of a button.

PerfectSense will even correct your most common spelling, spacing and typing errors as you type. So you don't have to take time to change "adn" to "and" or fix capitalization errors. LIke this.

Remember, WordPerfect is also a very important part of our new PerfectOffice™ integrated suite of applications. And no one can convert your existing WordPerfect files and macros like we can.

So visit your local reseller, or to order direct call 1-800-567-1173.

You'll discover the only word processor smart enough to write this ad. And read it.

WordPerfect®
NOVELL.

©1994 Novell, Inc. All brand and product names are trademarks or registered trademarks of their respective holders.

THE PERFECT PLACE TO WORK

Sporting a fresh new interface including high-resolution between period/game graphics, player trade capabilities and a whole bunch of on ice player animations (including blocked and faked shots bodychecks that may send players over the boards and a number of almost illegally contortionist goalie saves) NHL Hockey for the PC is here even while the real thing is on deserved hiatus

NHL Hockey 95 ships only on CD ROM, and prospective purchasers will want at least a double spin drive and either a gamepad or joystick for adequate control

Ultimate Football
by Microprose

Like another product reviewed here (Falcon 3 0), **Ultimate Football** is ideal for gamers who really want to get a close-up view of all the trials and tribulations of a specific macho occupation in this instance operating and being part of an NFL football team. This is no "little-dots-on the screen posing-as-athletes" exercise It's a full blown pigskin extravaganza from front office to chalkboard to playing field Decisions in all facets of Ultimate Football are difficult time consuming, authentic and ultimately rewarding.

Graphically, there's never been anything quite like Ultimate Football. Real player movements at all positions have been studied adapted, and modeled into what looks eerily like a real Sunday afternoon football contest Even the camera angles are awesome dude and are selectable at the press of a hot key

Ultimate Football requires a CD ROM drive and at least a 486 with 8 MB RAM is needed for satisfactory performance Modem play is supported for those with personal vendettas and as a bonus a diskette and instruction manual for the Franchise Football League is included

Cyclemania
by Accolade

If you've come this far into the article without deciding that now just might be the time to grab that CD ROM drive you've always wanted my, you are the stubborn one aren't you? Accolade's **Cyclemania** is yet another product that has dropped the old-fashioned diskette packaging, and for good reason.

Essentially your basic motorcycle racing game (albeit a good one that mimics the actions and feel of a power packed bike), Cyclemania makes its mark in its innovative use of real life video of roads and surrounding scenery That's right, folks Cyclemania lets the pseudo-biker blitz his or her way through 400 megabytes of real background as opposed to digitally drawn and colored replicas Several courses are at the ready and racers will also have to pick their way through overlaid animated competition innocent auto traffic, bike cops various farm animals, oil patches, and the like.

Although the actual video footage has been somewhat "pixelled" during its transformation to screen this new technology makes for an intriguing journey into the possibilities of gaming via the CD ROM Ever closer to reality we go a-marching

Software Stocking Stuffers
They say older is often better and in the case of these games time has not diluted their greatness only their cost If spotted in the software bargain bins, be sure to pick up:

Battle Chess (1988 Interplay) The age tested game of chess with superbly rendered and animated characters ready to do battle
Lemmings (1991 Psygnosis) We all know what lemmings do your job is to save the little furballs
Simcity (1987 Maxis) Control the workings and welfare of an entire city It's not easy but it is addictive
F-19 Stealth Fighter (1988 Microprose) One of the first really really good air combat sims
Ultima IV (1985 Origin) One of the first really really good role playing games.

Santa's Peripherals List

Flightstick And Flightstick Pro
by CH Products

These are the standard setters in the escalating joystick war For most games the two button Flightstick will do while the Flightstick Pro comes equipped with two more fire buttons and a "coolie hat" for external viewing in software supported games (i e flight simulations such as Flight Simulator 5 Falcon Gold, etc)

➤

SIGNA COMPUTER SYSTEMS
1358 Kennedy Rd Scarb ON, M1P 2L7 Tel (416) 755 1590 Fax (416) 755-5950

Government, Corporate & Educational Purchase Orders accepted.

Intel 486DX2/66
Intel 486DX2 66 CPU Green VLB Mainboard 128KC 4MB Ram, 420MB Hard Drive 32 Bit Controller 32 Bit 1MB SVGA 1.44 Floppy Drive, Mini Tower Case w/220 Watt Supply 14" SVGA .28DP Green Monitor 101 Keyboard, 3 Button Mouse MS Dos 6.2
$1495

CAD Workstation
Intel 486DX2 66 CPU VLB Green Mainboard 256KC 8MB Ram, 540MB Hard Drive 32 Bit Controller, ATI Mach 32 1MB 1.44MB FD SONY 15sf 15" Multiscan .25DP Trinitron, Mini Tower Case w/220 Watt Supply Honeywell Keyboard, Logitech 3 Button Mouse, MS Dos 6.2 & MS Windows 3.1
REDUCE $100 FOR A MAG 15
$2299

Multimedia 486DX2/66
Intel 486DX2 66 CPU VLB Green Mainboard 128KC 4MB Ram, 420MB Hard Drive 32 Bit Controller 32 Bit 1MB SVGA 1.44 Floppy Drive Mitsumi 2X CD Rom, Sound Blaster Compatible Card, CD Titles, Speakers, Mini Tower Case w/220 Watt Supply 14" SVGA .28DP Green Monitor 101 Keyboard, 3 Button Mouse, MS Dos 6.2
$1799

Multimedia Workstation
Intel 486DX2 66 CPU VLB Green Mainboard 256KC 8MB Ram, 420MB Hard Drive 32 Bit Controller ATI Mach 32 1MB VLB 1.44 Floppy Drive Mini Tower Case w/220 Watt Supply, 14" SVGA .28DP Green Monitor, Mitsumi 2X CD Rom, Sound Blaster 16 CD Titles, Speakers, 101 Keyboard, Logitech 3 Button Mouse, MS Dos 6.2 & MS Windows 3.1
$2199

Pentium-60 Workstation
Intel Pentium 60 CPU PCI Green Mainboard 256KC 4MB Ram 540MB Hard Drive PCI Controller, PCI 1MB SVGA, 1.44 Floppy Drive, Mini Tower Case w/220 Watt Supply 14" SVGA .28DP Green Monitor, 101 Keyboard, 3 Button Mouse, MS Dos 6.2
ADD $200 FOR A P66
$2099

Pentium-90 Workstation
Intel Pentium 90 CPU PCI Green Mainboard 256KC 8MB Ram 540MB Hard Drive PCI Controller, PCI 1MB SVGA, 1.44 Floppy Drive Mini Tower Case w/220 Watt Supply, 14" SVGA .28DP Green Monitor 101 Keyboard, 3 Button Mouse, MS Dos 6.2
$2599

5 year labour warranty

At SIGNA, we use only the best Motherboards which consistently outperform the rest We also use ATI Video Cards ATI is a Canadian company with local support High-End components perform.

Upgrades & Repairs Made Easy!

Motherboards
T 486SLC/33 with CPU 159
IBM 486SLC2/66 ZVL with CPU 229
Intel 486SX/25 Opt 3VL 128KC 224
Intel 486DX/33 Opt 3VL 128KC 299
Intel 486DX2/66 Opt 3VL 128KC 418
Pentium-60 Opt 4PCL 256KC 429
Pentium-66 Opt 4PCL 256KC 1029
Pentium-90 Opt 4PCL 256KC 1329

Hard Drives
IBM 280MB IDE 259
Quantum 340MB IDE 269
Conner 420MB IDE 289
Quantum 540MB IDE 329
Quantum 730MB IDE 429
West Dig 730MB IDE 459
Quantum 540MB SCSI 389
Quantum 1 08G SCSI 459

Cases
Mini Tower 220W 69
Medium Tower 220W 89
Medium Tower 235W Dlx 119
Full Tower 250W 169
Server Case 300W 2 Fans 229
Desktop Case 220W 69
Replacement 1 Shell Fan 14
300W Power Supply 69

Video Cards
S3/Trident Vesa 1MB 109
S3 '864' PCI 1MB 179
ATI Mach64 PCI/VLB 2MB 279

SCSI Host Adapters
Adaptec 1522 16 Bit ISA 126
Adaptec 1542CF High Speed DMA 288
Adaptec 2940 32 Bit PCI RISC 418

Season's Greetings from the Staff at SIGNA!

Fax Modems
Monterey 14 4 Internal F/M 89
US Robotics 14 4 Int./Ext F/M CALL
US Robotics 28 8 Int./Ext F/M CALL
GVC 14.4 Int/Ext F/M 129/149
GVC 28.8 Int/Ext F/M 289/309
GVC 9600/2400 Int/Ext F/M 79/99
GVC Voicemail 14 4 Int. 149

CD-Rom's
Mitsumi Dbl Speed CD w/interface 179
Panasonic Dbl Speed CD w/interface 179
Toshiba 3501 4X SCSI CD-Rom 499
NEC 4X Quad Speed Internal 579
Plextor Quad Speed 599

Monitors
Aamazing 14" .28DP NI 299
Samsung 14 .28DP NI 349
Mega Image 15" .28DP NI 469
Mag DX 15" .28DP 509
Mag DX 17" .26DP 899
Sony 15sf 15 .25DP (new) 659
Sony GDM-17se 17" .25DP 1499

Printers
HP Deskjet 310
HP Deskjet 540
HP Deskjet 560C
BJ 10sx 509
BJ 100 319
BJC 4000 699

Notebooks
AST
ASCENTIA 486/33 4/250MB COLOUR 3099
BRAVO 486 MB MONO 2099
SAMSUNG 486 MB 800/WIN 1799
TOSHIBA T1910 486SX-33 4/200MB 2099

Multimedia
Creative Labs Game Blaster 549
Creative Labs Discovery CD16 349
SB 16 Value Edition 139
SB 16 Multi-CD 239
SB 16 SCSI 2 219
SB AWE 32 379
Wave Blaster 239
Video Blaster 299
Creative Labs SBS300 Speakers 159
Win/TV Celebrity (TV Capture) 595
TV Coder VGA → NTSC (TV) 239
Roland SCD-15 Daughter Board 349
Roland MA 20 Speaker 149
Roland PC 200 Keyboard 349

Roland Music

Tape B-U Units
Colorado 250MB Internal 249
Colorado Trakker 250MB 409

TIRED OF THE 2 OR 3 RETAILERS THAT ADVERTISE LOW PRICES BUT DON'T ACTUALLY STOCK ANYTHING? SIGNA STOCKS OVER 90% OF THE ITEMS ON THIS PAGE!

ALL TRADEMARKS ARE PROPERTY OF THEIR RESPECTIVE OWNERS. CALL FOR ITEMS NOT LISTED [illegible] PRICES AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

Both sticks come with smooth throttle wheels, offer unwavering fluid control, stable calibration and solid craftsmanship.

Jetstick

by CH Products

New for 1994, the CH Jetstick is "entry level" only in CH press releases. Smaller than the Flightstick and without an on board throttle, the Jetstick nevertheless gives great response and is leaps and bounds ahead of any similar priced controller. It [illegible] and you wind up buying another product, don't say I didn't warn you.

Wingman And Wingman Extreme

by Logitech

Just out of the gate, Logitech's Wingman line of control devices are finely sculpted, esthetically wondrous objects d'art. Oh yeah, they make fine joysticks too. Both offer fully contoured grips for a comfortable feel and heavy bases for desktop immobility, while the Wingman includes an on-board throttle wheel, and the Extreme sports four fire buttons and a coolie hat (but curiously, no throttle). These babies are serious contenders to the long-occupied CH throne for flight and car sims, although their size and shape won't allow for easy fingertip control in less precision demanding pursuits such as arcade or adventure dramas.

Thrustmaster F 16 FLCS

by Thrustmaster

This "everything but the kitchen-sink" stick is tailor made for the seriously addicted flight sim pilot — someone who long ago broke any ties with reality. An accurate representation of the control stick currently used on the F 16 model Falcon fighter, the mammoth F 16 FLCS is literally littered with buttons, switches and rockers for every finger, with a coolie hat thrown in for good measure. The unit is completely programmable (plugging into both the keyboard and joystick receptacles — the keyboard then plugs into it) and this means virtually any keyboard function, including macros, may be controlled by any button or switch on the stick. As well, the F 16 FLCS has an on-board memory chip and will remember all the latest programmed settings for next time. The ultimate in flight/jet fighter control.

Phoenix

By Advanced Gravis

The Grand Wazoo of all joysticks, the just released Phoenix, is instant Nirvana for the computer game-o-maniac, but a nightmarish vision come to life for his or her long-suffering mate. Built with the theory that any procedure or function within any game can be accurately manipulated with but a single control device, the Phoenix is a bold step into futureworld for its creator, Burnaby B.C.'s Advanced Gravis.

Physically, the Phoenix sports a slightly sloped low profile 8" x 8" base complete with an eight button stick stemming from the right side, offset by a button laden extension that protrudes from the front left corner, which culminates in a mouse-shaped throttle/ rudder/ gamepad-type control that turns and slides independently of the base. Got all that?

Connecting to both the keyboard and joystick receptacles, the Phoenix may be customized to activate any keyboard function with any one of its controls, and it offers complete versatility for any type of software. With right hand gripping the stick and left hand pulling and turning the throttle/rudder control (which doesn't have to be the throttle/rudder control!) and a plethora of buttons in between, there really is no limit to what Phoenix can do.

Propedals

by CH Products

Extending the computerized simulation experience just a little further, the CH Product ProPedals fill a dual role, that of acceleration/brake pedals for road racing affairs and rudder pedals for flying games. Mounted atop a low wide base, the pedals are built to accommodate even the largest foot, and successfully mimic the fore/aft motion of airplane pedals and the pivoting action of those found in a car. Granted, it takes some acclimatization in using four appendages instead of two, but the ProPedal unit, apart from being the first such product that really works, is a very enjoyable option that will find a home beneath many computer desks.

G-Force Flight Yoke

by Suncom Technologies

The G-Force has been around for awhile but it remains just about the best yoke I've tried. This futuristic looking peripheral provides accurate control for both flight and auto racing simulations, featuring a unique swiveling column fore/aft axis and "U"-shaped yoke handle that pivots at the base and arcs from side to side. The G-Force comes equipped with large, comfortable thumb and trigger buttons at the tops of each yoke handle, trim adjusters, and a column switch that reverses the signals going to each pair of buttons. The unit can be mounted via four suction cups or clamp.

➤

Pentium 60VESA $2389

- 8 MB Ram (72 pins)
- 512K Cache
- 520MB Hard Drive
- 1.44MB Floppy Drive
- ATI VESA LB Ultra + SVGA 2MB RAM
- 15" SVGA Monitor NI 72HZ
- 101 Enhanced Keyboard
- Mid Tower Case w/ 230W
- Microsoft Compatible Mouse
- VESA Controller W/2S, 1P & 1G

MG 486 System

486DX2-66Mhz $1779
ATI VESA LB Ultra + SVGA 2MB RAM
520MB Hard Drive w/VESA controller
8MB Ram
256K Cache
1.44MB Floppy Drive
2serial 1parallel 1game ports
15" SVGA Non Interlaced Monitor
101 Enhanced Keyboard
Mid Tower w/230W
MS compatible Mouse

486DX2-66Mhz $1369
VESA Local Bus SVGA 1MB RAM
420MB Hard Drive w/VESA controller
4M Ram
128K Cache
1.44MB Floppy Drive
2serial 1parallel 1game ports
14" SVGA Monitor (1024 x 768)
101 Enhanced Keyboard
Mini Tower w/230W
MS compatible Mouse

486SX33Mhz $1119
210MB Hard Drive
4M Ram
128K Cache
SVGA Card 512K
1.44MB Floppy Drive
14" SVGA Monitor (1024 x 768)
101 Enhanced Keyboard
Mini Tower w/230W
MS compatible Mouse
2S, 1P 1G ports

PRINTER -

Raven SP 2405 B / W	$225
Raven SP 2405 color upgradeable	$280
Raven 2407 B/W	$285
Raven 2407c Color	$330
Canon BJ 100 Bubble jet	$325
Canon BJC 4000	$765
HP 4 Plus Laserjet 12ppm	CALL
HP 4L Laserjet 4ppm	CALL
Raven LP-410 Laser	$690

CD ROM + SOUND CARD -

D/S int Rom S Blaster16 MCD Spk & 12 CD titles software	$859
D/S Int Rom 16bit S Card Speaker	$269
Cardinal 16 bit S Card D/S Int Rom SVGA card 1mb	$299

CD Title -

Microsoft Encarta	$ 99
Comptom's Ency Interactive	$ 25
Doom II	$ 70
Cyberdreams	$ 20
Space Quest IV	$ 20
7 Guest	$ 25
King Quest V	$ 25
Family Health Book	$ 20
49 Windows Games	$ 20
Dandy Dinosaurs	$ 25
Electronic Cookbook	$ 20
Iron Helix	$ 20
F15 Strike	$ 25

MODEM -

2400 External Modem	$ 49
96/24 Internal Fax Modem	$ 45
14.400 Internal Fax Modem	$ 99
14.400 External Fax Modem	$ 149

Video Card & Monitors -

SVGA 512K + SVGA Monitor	$ 319
SVGA 1M (ISA) + SVGA NI Monitor	$ 399
SVAG 1M (VLB) + SVGA 15" Monitor	$ 569

- Price are subject to change without notice.
- Warranty: Three years labor and One year parts (Carry In)
- Corporate, Education Institution, and Government P.O. are welcome.

MicroGram Computer Industries Inc.

MARKHAM
570 Alden Rd # 8
☎ 905 513 6180
F 905 513-1602
(At 14th Ave. & Warden)

NORTH YORK
1122 Finch Ave. W # 2
☎ 416 667 9787
F 416-667 1858
(Across Swiss Chalet)

OTTAWA
Service Center
☎ 613-224-1434

Nielsen

Do you need help identifying trends and profit opportunities in computer product sales?

To make informed business decisions that contribute to your bottom line, you need reliable, independent data. The Nielsen Computer Product Index (NCPI) measures PC hardware and software sales in retailer and dealer channels across Canada.

NCPI's ad hoc analyses, special studies and bimonthly reports for nine distinct PC product categories give you access to vital information:

- Dollar and unit sales trends
- Developing market segments
- Top vendor and item performance
- End users (business, government, education, home)
- Hottest selling "bundled" configurations
- Street pricing
- Size and demographic profile of home market

For more information on how NCPI can help your business, contact an NCPI representative at 905-475 1131, ext. 2563

Nielsen North America

D&B a company of The Dun & Bradstreet Corporation

The Pro Control Steering Wheel

By Wizard Racing

Real cars are driven with a steering wheel, and now Wizard Racing brings a real steering wheel to the computer. The **Pro Control Steering Wheel** is built around an authentic Go-Kart steering wheel and shaft, which have been set at a comfortable driving angle into weighted wedge-shaped black plastic housing that sits on the table top. On the back side of the padded wheel are four fingertip switches, two on each side, that accommodate throttle, brake and gear change control. An on/off switch on the rear of the housing will accommodate the connection of soon-to-be-released Wizard foot pedals. Wheel action features graduated resistance and successfully mimics the motion and feel of the real thing.

Wireless Bandit

by Al Tech

The **Wireless Bandit** is a handheld game controller built in the spirit of its Sega-based inspiration, with one important exception - it sprouts no wires! Simply connect the tiny infrared receiver to a joystick port, install a pair of "AAA" batteries, and evil-doers beware! Sending omni-directional signals for at least twenty feet, each handheld unit features a digital eight way controller, two manual fire buttons and two of the turbo variety, allowing for a quicker trigger finger. Recommended for arcade and adventure games, but not for anything where analog directional guidance is a must. No wires - what a cool idea.

Thunderseat

by Thunderseat Technologies

Tel: 1-800-8-848-6337

Another suggestion from the "pushing the envelope" category: Thunderseat Technologies' **Thunderseat** places the unsuspecting gamer in an oversized chair that is wired with a large speaker for body moving sound. The seating unit itself is very comfortable, placing the gamer in a low, reclining position similar to that of a jet or race car. The full package (a rather large proposition) comes complete with free standing side pods for various control devices and a swing away arm for the keyboard, and is the ultimate device for the game-player that already has everything else.

A Final Thought For The Holidays

Have yourself a merry little Christmas, and please remember to manually extract yourself from the computer on the big day. I know it's frightening, but real live people will most probably want to say hello. ❑

Contacts:

Al Tech	510 226-8960
Accolade Inc	408-985-1700
Advanced Gravis	1-800-663-8558
CH Products	619-598-2518
Electronic Arts	1-800-245-4525
Epic MegaGames	1-800-972-7434
LucasArts Entertainment Co.	1-800-782-7927
Logitech	510 795-8500
Microprose	1-800-879-7529
Opcode Interactive	415-494-1112
Papyrus (Distributed by Virgin Interactive Entertainment Inc.)	1-800-874-4607
Spectrum Holobyte	510-522 1164
Suncom Technologies	708-647-4040
ThrustMaster	503-639-3200
Thunderseat Technologies	1-800-849-6337
Wizard Racing Ltd.	503-965-7156

CTC
Tel: (416) 297-6773 Fax/Voice Mail 298-6152
2950 Kennedy Rd.#202, N.of Finch, Mon-Fri/Sat 11-7/5

MAG Monitor !! Pentium Memory !! Intel CPU !!

486DX2-66 $1,899 58/mth
Pentium-66 $2,499 84/mth
Pentium-90 $2,799 96/mth
8MB RAM 420MB HDD, 3.5" FDD, 15" MAG 28 N.I. @1280 auto-off ATI Mach32 1MB video IDE + I/O HoneyWell KeyBoard Minitower case MicroSoft J-mouse DOS6+Win3.1 $99

486DX-33 $1,555
486DX2-66 $1,666
4MB RAM, 365MB HDD, 3.5" FDD 14" ACER 28 N.I. 1M SVGA, IDE SB 16 MCD with ASP upgradable SONY CD-ROM Daul speed, speaks Minitower, Mouse, K/B, 2S/P/G ports

387DX Math Co-prcssor $42
486SX Math Co-prcssor $169
1M SIMM 30Pin 4MB ...... $55/49 x 4
4M SIMM 30Pin 16MB ...... $185 x 4
4M SIMM 72Pin $195
8M SIMM 72Pin $385
486DX, M/B, VLB, Green $119
486DX, Enhncd BIOS .... new$139
CD-ROM 2X,16 sund,spk.... $249
Fax/Modem 14 4/14.4 .... $59
1GB /730MB HDD $799/459
14"/15"/17" N.I. .... $289 /429/899
VLB video 1MB upto 2 MB $89
Ethernet network NE2000 .... $59
5.25" / 3.5" FDD $56/46
4 IDE HDD ctrl $39
High Speed I/O w/16550 .... $35

Upgrade Your Computer
$299 .... frm 386DX to 486DX 33
$599 .... RAM frm 4M to 16Mb
$249 .... HDD frm 40M to 360M
$169 .... frm 486SX to 486DX
$888 .... frm 486DX to Pentium 60

$199 Voice Mail/Fax/Modem
$289 Voice Mail / Fax / Modem 14 4
Like Big Mouth, but w/Fax & more
- Deliver MSG to Cell Phone, Pager
- Built-in FAX on DEMAND

$259 Network Starter's Kit
2Pcs share HD, CD-ROM, Prntr etc
NE2000 standard cards, T&BNC x2
- Terminators, Netware lites 1 1, cable

Monthly pay, Cash carry or certified check, no credit card

WE DO TRADE-INS
We turn your old Computer into CASH

What a DEAL!! $229
Panasonic Double Speed
CD Rom, 16 Bit Sound Card
Speaker & Microphone, Earphone

486DX-33 $1,199
486DXII-66 $1,269
486DXII-66 $1,349

Complete With:
- 128K Cache
- 4Mb RAM
- 1 44Mb Floppy Drive
- 420 Mb Hard Drive
- SVGA Color Monitor 28 N.I.
- SVGA Video Card (1Mb VL Bus)
- Super I/O Card with 2S/1P/1 G
- Mini-tower Case
- 101 Enhanced Keyboard
- Free Mouse

Multi-Media Package $229.00

Special
486SLC-33 $949.00
- 4Mb RAM (up to 16Mb)
- 210Mb Hard Drive
- 1 44 Floppy Drive
- SVGA Color Monitor
- SVGA Video 512
- Super I/O w/2S/1P/1 G
- Mini Tower Case
- 101 Enhanced Keyboard
- Free Mouse

Multi-Media Upgrade $229

We SPECIALIZE in Upgrading your System
2X Speed CD-ROM 149–179
Sound Blaster 16 115
Audio Plus 16 59
486 DXII/66 VL Bus 359-389
420 MB HD 259-279
540 MB HD 299-329
14.4 Fax Modem 89

PENTIUM
As low as $1700
PROMOTION SALES

All Prices are cash discounted, must be paid by Cash or Certified Cheque
Prices are subject to change without prior notice

CTS Computers
1182 Queen Street East, Toronto, Ontario
Tel (416) 466-7153 Fax: (416) 466 6328

Mon.-Fri. 11 00am - 8:00pm
Sat. 11 00am - 7:00pm
Sun By Appointment Only

MCC Marcom Computers Canada Inc. 4490 Chesswood Ave, #3 **Tel: 638-4411**

HOURS:
Mon - Fri 9am - 6pm
Sat 10am - 5pm
Sunday 11am - 4pm

OPEN 7 DAYS

TO ORDER, PLEASE CIRCLE TITLES BELOW

STOP

ALL NEW TITLES

PRICES: 1-9: $3.49 ea 10-49: $2.59 ea 50-99: $2.35 ea 100+: $2.15 ea **BONUS:** For Every 10 Disks You Purchase **PICK 2 FREE**

SUPER VGA GAMES

Mario Brothers HG 103 Fantastic version of the popular arcade game. Just like the nintendo game. (VGA Req)
VGA Trek HG 155 Superb Star Trek game for VGA fight the Klingons and Romulans EXCELLENT GRAPHICS !
Catacombs of the Abyss HG 166 (2 disks) JUST LIKE WOLFENSTEIN with 3-D graphics ! Journey through the ancient danger fraught lands filled with wizards. Magic Warriors & monsters. Super graphics with full SB music. VGA
WORD RESCUE ED 170 An incredible children's educational game with SB support. Like Super Mario ! VGA
WOLFENSTEIN 3D HG 175 (2 disks) Escape prison from a castle in WW II Germany. SB support. THE BEST !! VGA req
3-D Flight Simulator HG 178 **CORNCOB 3D** The best flight simulator we have seen !! Similar to Falcon 3D in design with customized missions. VGA req
COMMANDER KEEN 6 HG 185 ALIENS ATE MY BABY SITTER. Help keen save his baby sitter. SB Sound & graphic
FALCON 3D HG 181 (2 disks) Yes this is really THAT program THAT being the best flight simulator ever created with full 3D vectorised graphic effects, sound support and the most action seen on a computer game yet. Fly ground assault missions, fighter combat, last bombing missions. VGA
COMMANDER KEEN DREAMS HG 190 **THE LOST EPISODE** Only you can help Commander Keen overcome killer vegetables and fruits which have conspired to spoil his dream in a action packed arcade. SB support. VGA
WOLF 3D Spear of Destiny HG 199 (2 disks) The greatest version of the most popular game ever created !! Fear full levels in this great version with stunning 3-D graphics, more guards, many more great sound effects. VGA
ROBOCOP WARRIOR HG 222 (2disks) [ELECTRO ROBOT] ROBO COP is coming to town and you've got him with this program. Fine best in graphics, Digitized ADLIB/SOUND BLASTER speech & smooth scrolling graphics. VGA req
GOLF Jack Nicklaus HG 227 (2 disks) The ultimate in computer golfing by Accolade. A full working shareware version with the most amazing graphics and ADLIB/SOUND BLASTER support. Even Better than LYNX. VGA
INDIANA JONES Fate of Atlantis HG 236 (2 disks) Our ever loving hero must discover the fate of lost Atlantis. Best of graphics last All digitized blaster music and blaster. Guide Indiana in search of [illegible] and adventure along his quest. Full mouse support and many options. VGA
WOLFENSTEIN Street Fighter HG 251 (2 disks) MORE OF THE #1 ACTION GAME OF THE YEAR !! If you loved Wolfenstein the you'll love more levels more action new characters, graphics, secrets and enemies. Now even better. Try your luck battling the meanest evil ninja warriors in this one. We don't need to sell you on the quality of this one so here it is. VGA req
MORE WOLFENSTEIN HG 253 (2 disks) NEW SHAREWARE EPISODE of the #1 game of the year !! Created by a user with all new layouts, events and graphics.
WOLFENSTEIN 88 New Levels HG 256 88 custom designed boards all new episodes ! Full Wolf 3-D Req
PAC Wolfenstein 3-D HG 257 A fantastic add on to Wolf 3-D change the Nazis to Pacman monsters. Wolf req
Wolfenstein 3-D Utilities HG 258 Super set of utilities for Wolf 3-D. Print out maps, need debug tools, find hidden secret, secret levels, & more. A must for all serious gamers !
NINJA RABBIT HG 266 (2 disks) In the tradition of the ninja turtles, comes the cult of the NINJA RABBIT. Fight all the battles with the international crime ring BLIME. VGA
STAR TREK Combat Simulator HG 269 ULTIMATE COMBAT SIMULATOR!! 88 SB support. Cannot the Enterprise have a "explore" inside bridge. VGA

ALL NEW !!!

The following games ONLY AVAILABLE ON 3.5" DISKS !!

DOOM (HD) SE 000 (2 disks) The absolute latest version (currently V1.66) using the graphic engine for DOOM e) of the ULTIMATE GAME OF THE YEAR !! THIS GAME NEEDS NO INTRODUCTION 386+ VGA 4 meg ram
BLAKE STONE (HD) SE 008 Aliens of Gold !! OH NO !! Who will stop the evil plans of Dr. Goldstern, a mad demented scientist on the edge of [illegible] space. In this DOOM Like classic. Full Adlib/SB music & effects. VGA & 2 meg req
PRINCE OF PERSIA II (HD) SE 061 Save your princess from the evil escape in the empire but watch out for the [illegible]. Jump, climb and fight you way through the halls and dungeons levels of the Sultan's palace. SB VGA req
WORLD CIRCUIT (HD) SE 067 Car racing excitement !!
SANGO FIGHTER (HD) SE 068 LOOK OUT MORTAL KOMBAT !! The ultimate karate game!! Amazing moves and powers !! AD /SB Support. VGA
CORRIDOR 7 (HD) SE 070 The newest program release after DOOM. Top's of all 3-D games put together. The vision has been invaded by aroods of aliens. Travel through the corridors. 386+ 4 meg. VGA req

PICKLE WARS (HD) SE 071 The peaceful planet of Arcadia is being invaded by the evil Pickle people. Fight on using your newly developed SALAD BLASTER. Blues sq graphics and a Adlib/Sound Blaster Support. VGA
HALOWEEN HARRY (HD) SE 072 Use your weapons to turn the bits on the gruesome aliens. Absolutely unbelievable graphics and sound will keep you on the edge of you seat ! Blasting effects in this four way moving multi-level game with superb sound card support!! VGA req
EPIC PINBALL (HD) SE 075 One of the best games we have ever seen and a 10% selling game in the market ! SB VGA
DUKE NUKEM II (HD) SE 076 THE DUKE IS BACK AND HE'S PISSED ! Abducted by aliens during an interview on a TV show Duke kicks butt to escape. Superb SB music. VGA
THE LOST VIKINGS (HD) SE 080 Get your three viking heroes to co-operate and use each of the individual's unique powers to foil you alien captors and their advanced weaponry !! The best quality graphics & SB support around. VGA req
GOD OF THUNDER (HD) SE 081 THOR you must trek and fight your way around dozens of mystical locks & puzzles and hundreds of evil creatures. Superb VGA graphics with an incredible SB musical soundtrack and effects ! VGA
JAZZ JACKRABBIT (HD) SE 082 ONE OF THE GREATEST GAMES EVER CREATED ! Bunny on steroids is forced as the forces have captured his sweetie. Eve Earlong is holding her captive ! BETTER THAN SONIC. VGA, 386+
MYSTIC TOWERS (HD) SE 083 Explore hundreds of rooms and use magic & wits to overcome the traps, dark forces and varied creatures. Excellent animation filled with humor. Digital Adlib/ Soundblaster music support. VGA
MECHWARRIORS II - The Clans SE 084 (HD) Vindicate yourself & your Clan against the MechWarriors in Arcade's a new MECHWARRIORS. The full shareware ver with all stunning graphics and game play. 386+ VGA 4 meg
TERMINATOR RAMPAGE !! SE 085 (HD) Now mess with A fold. but to un do hell if he was also cyborg ! Full Shareware version! will blow you away with its digitized real best effects & action. 386+ VGA, 4meg req
CYCLONES (HD) SE 086 Travel the space corridors in 3D Virtual Reality space with the full shareware version of Raven's most spectacular game CYCLONES !! Full SB musical score & effects. Full mouse support. VGA
RAVENLOFT (HD) SE 087 DOOM & WOLFENSTIEN graphics !! An AD&D game by SSI & TSR in beautiful and 3-D virtual reality graphics ! VGA
DEPTH DWELLERS (HD) SE 088 Plunged into mines you witness the true dynamic nature of the [illegible] not for you. VGA SB support. 4 Mb RAM, 386+)
NIGHTMARE 3-D (HD) SE 089 Enter the 3D virtual reality house of Dr. Hjgmenton in effects of [illegible] and a mystical manor action leads by the "other side". Supports SoundBlaster mouse & joystick. VGA 386+
F 15 STRIKE EAGLE (HD) SE 100 Fly in Desert Storm & take control of the # A-S-T fighter. SB music VGA 386+
HOCUS POCUS (HD) SE 101 Enter the magical kingdom to fight the enemies to become a full Wizard. Great graphics. SB music. 386+ VGA
3-D TREK SE 104 Save a galaxy from last step from destruction. VGA **FRANKENSTEIN** SE 105 Journey through the magnificent castle of frankenstein avoiding creatures that want your dead. Animated graphics. SB VGA
OH NO !! MORE LEMMINGS SE 106 The [illegible] continues in this special edition. guide your Lemmings to exit the levels safely. [illegible] levels. SB support VGA
LEMMINGS II : The Tribes SE 107 NEW EPISODES featuring all SE & super graphics & gameplay. VGA
BODY BLOWS SE 110 Martial last fighting mayhem. beat your opponent senseless in the best of 3 rounds. Unreal high quality graphics !! SB music. VGA, 386+
TUBULAR WORLDS SE 111 An arsenal of powerful weaponry & sound. Features never before seen graphics quality with a full SB musical score. VGA req
NIGHT RAID SE 112 Blast the enemy planes out of the sky & defend your lonely desert bunker against waves of invaders & planes. SB VGA
COOL CROC TWINS SE 115 Don't let the moreoid cavemen and their companions stop you. Includes four huge levels. SB support amazing graphics !! VGA
EPIC BASEBALL SE 116 Best animated baseball out !! Super graphics and sound card support ! 386+ & VGA
SHADOW KEEP SE 117 Wizard Merlin says you are a relative of King Arthur & you must free the spirits of 3 kingdoms. Find the sword Excalibur. SB VGA
TURBO TREK SE 118 Now you have complete charge of a starship in full combat. Play the computer or a friend. VGA/EGA & mouse req
VISUAL STAR TREK SE 119 Many hours of absorbing space fight fun where you must locate a source of dilithium crystals and fight "cloaked" Klingons. VGA
SIMTREK SE 120 With more have 24 missions! this space flight & combat simulation program will keep you at the ships bridge. VGA & mouse
LOTUS II RACEWAY SE 122 Sitting behind the wheel you race your car around the tracks shifting gears with other drivers. Intense Racing. VGA req

GALAXY TREK (HD) SE 123 Superb Star trek action with great graphics, & SB effects. VGA
F117A STEALTH FIGHTER SE 128 SB, 386+ The Best stealth combat flight sim on the market !! VGA
TREK THE N^th GENERATION SE 130 Possibly the best Star Trek game we've seen so far !! Fantastic sound action & graphics !! VGA req
XATAX II SE 135 The most fast paced graphically perfect blaster game on the market today ! Super SB music & effects in an awesome interways created. VGA
TOM DICK & HARRY SE 140 A 486+ is recommended for this package because of its incredibly advanced fight graphics, but of the world digitized Adlib/Soundblaster musical sound track last effects, and super fast paced game play !!
TRUE BLOOD SE 141 The Karthanian ultimatum is not to be ignored but you did you IDIOT. Try to avert your butt from the most violent species in the galaxy. Super graphics. VGA
SLICKS RACER SE 190 Racing at its best in track format. Compete for GAME MONEY and PRIZES around the most challenging track around ! VGA
BARDS QUEST I SE 143 Dungeons of the unknown !! NEW NEW NEW From Visionquest. Best Graphics & SB music effects one of the best games ever. VGA
JOE SNOW SE 144 Enter A world of JOE SNOW where ice need all and FIRE is the enemy !! Full SB effects with the nintendo best in graphics.
ROAD KILL SE 145 Death by squashing is the theme for this ultimate rugged road racing challenge. Feel you follow road warriors and blast em !! SB VGA
THE BURPS SE 147 Use a 3 heroes, need with their own special skills, weapons, last powers. Use you brain and Brawn through this one !! VGA
KING ARTHURS COURT SE 148 The best Medieval strategy game in which you conquer Great Britain. Terrific SB theme music, digitized sound effects, voices & more. VGA
KINGDOM OF SIREE II SE 149 **BLACK MAGIC !** Journey to the land of Sheol where valiant knights fight against the dark forces rising. Superb MUSIC and graphics with a huge land to explore, spells, creatures & more. VGA
THE INFINITY MACHINE SE 150 Crank any game with the infinity machine and give yourself whatever you need !!
NHL HOCKEY (HD) SE 1016 So realistic you will think you are on the ice. Super Graphics!! The game time is limited to 2 minutes per play. SB Support
OXYD SE 1200 RATED ONE OF THE TOP GAMES OF 1994. The Wheel may not be ready ! Control an elven orb & experience 10 levels of mazes. SB VGA
BART'S LAW SE 1210 A superb colorful and naughty arcade game with several rounds to test your skills. Based on cartoons and graphics with SB support. Mouse & VGA
BACKGAMMON SE 1217 For all you people that love backgammon here is a beautiful shareware version of the classic board game. Play this superb game. VGA req.
SILVERBALL PINBALL SE 1221 (HD) Super detailed graphics & SoundBlaster effects make this last of the various pinball games ever. VGA

WIN CLEAN (Uninstall) SE 748 UNINSTALL
FAX & SNAPFAX SE 785 Two FAX programs
NEVERLOCK SE 414 The ultimate in copy protection cracking for popular hard to copy software packages !
PKZIP / UNZIP SE 430 DATA COMPRESSION

DOOM ADD ONS !!

DOOM DOOM Latest Version SE 182 (HD) (2 disks) The absolute latest version of this great hit package rated by all as the best game EVER ! 386+ 4meg
DOOM STAR DOOM WARS SE 2001 (HD) (2 disks) A complete new shareware DOOM all included with new Star Wars type graphics, effects, music, and sound. A whole new look for the classic package ready to roll on your system ! 386+ VGA 4meg
DOOM CAD SE 2000 Draw & create new DOOM levels
DOOMED 1 SE 2003 Best doom editors and best creators
MYDOOM EDIT SE 2004 Another fabulous DOOM editor
DOOM FX II SE 2005 Super add-ons to the Evil DOOM
DALEKS SE 2006 Dr. Who's enemy invades PHOBOS
ENERGIZER BUNNY SE 2007 Rabbit gets away ! YUM
EXTRA LEVELS SE 2008 More deathmatch DOOM levels
EXTRA LEVELS II SE 2009 EVEN MORE LEVELS !
FIRE FIGHT ! SE 2011 THE MOST AWESOME SET
DOOM BOOM II SE 2011 Add sounds & music to DOOM
SOUND DOOM SE 2012 More great NEW Doom sounds
STAR DOOM PATCH SE 2013 (HD) Star Wars patch
MISSIONS 1 SE 2014 (HD) 7 new missions for Full DOOM
MISSIONS 2 SE 2015 (HD) 30 new missions for full DOOM
MISSIONS 3 SE 2016 (HD) 11 new missions for full Doom
MISSIONS 4 SE 2017 (HD) 20 new missions for Full DOOM
MISSIONS 5 SE 2018 (HD) 22 new missions for Full DOOM
MISSIONS 7 SE 2020 (HD) (2 disks) DOOM ALIENS !! Uses new graphics and sounds
DOOM VS. CLINTON SE 2021 (HD) Blast Clinton to hell
AUDIO STUDIO SE 2022 (HD) Add new sounds to DOOM
LEVEL EDITORS SE 2024 (HD) Three full level editors

STOP BY

VISIT OUR SHOWROOM

HUNDREDS OF ALL NEW LOW COST TITLES

FREE SOFTWARE COUPON:

Bring this coupon to our office and you will be entitled to 1 free software disk. Valid 1 per customer per month.

MORE UPGRADES !!

WOLF3D - SPEAR OF DESTINY SE 2070 21 NEW levels for the fabulous package Spear of Destiny. Experience more levels and action than ever. Full spea
WOLF3D BEAVIS & BUTHEAD SE 2071 (HD) Blast every Beavis & Butthead in the ultimate game of Wolf 3D. Plus blast the hell out of BARNEY. Barney bites it !
EVIL BLOOD WOLFENSTEIN SE 2072 (HD) The toughest, goriest, bloodiest Wolfenstein that you will ever try to beat ! Can you survive? good luck ! VGA
WOLF3D Hints, Cheats, Maps SE 2073 More great utilities for the virtual game that's at the top of the charts. More detailed maps for all levels and Spear of Destiny. More Lives & Ammo, even as most if you choose & MORE VGA req
WOLF3D STAR WOLF WARS SE 2074 (HD) A superb add on to the Nazi killing wonder !! This also includes the version of Wolf3D needed to run patch. VGA
BLAKE STONE UTILITIES DISK SE 2015 (HD) Utilities to use with Blake Stone Aliens of Gold. Everything you could ever want. A is the set for you 3-D gamers !
WOLF 3D - Dungeons of Death SE 2016 Arcade 100 unique and complete levels for Wolf3d. Extremely challenging and FANTASTIC new levels!! Wolf 3D & VGA req
WOLF 3D EXTRAS VOL II SE 2077 **ESCAPE FROM THE HOUSE OF STYLE** !! ITS HERE ! The Wolf3D add on that everyones been talking about and you've been waiting for. Escape if you can from this incredibly violent Wolf 3D req
WOLF 3D NEW EPISODES SE 2018 This set includes 40 levels. ALL NEW EPISODES count em for the shareware version of Wolfenstein. Wolf 3D req

HUNDREDS OF

MAC

TITLES AVAILABLE

FREE CATALOG WITH EVERY ORDER

FOUR WAYS TO ORDER:

1- MAIL YOUR ORDER
2- FAX YOUR ORDER (638-4477)
3- PHONE YOUR ORDER (638-4411)
4- VISIT OUR OFFICE AT FINCH & DUFERIN

ORDER:

Name ____________________
Street ____________________
City, Prov: ____________________
Postal Code ____________________
Phone# ____________________

PLEASE CHECK ALL THAT APPLY

VISA: __
MC: __
CHK: __
5.25" __
3.5" __

CREDIT CARD # ____________________
EXPIRY DATE ________
NAME ON CARD: ____________________

Disks ___
Free Disks ___
Price per Disk $____
Post & Hand $ 4.00
**SUB-TOTAL $____
7% GST on ** $____
8% PST on ** $____
TOTAL $____

MCC MARCOM COMPUTER SERVICES 4490 CHESSWOOD Dr #3, Downsview, Ontario, M3J 2B9

Learning and Having Fun: Guide to Children's Software

BY PEDRO ARRAIS

As the holiday season approaches, most parents' thoughts turn to their children. It can be tough deciding what special toy will bring a smile to their faces. For those of you with more than GI Joe or Barbie on your list, the offerings in children's and young adult's software is astounding.

Entertainment Not Enough

"Edutainment" software with its colorful visual and audio elements imparts knowledge while allowing a child to have fun. By varying the way in which a lesson can be presented a good program should last as long as interest is maintained

Television also entertains how many kids do you see glued to the screen? Therefore to make the computer competitive, software developers have to create the same entertainment value (not easy) while also enlightening and challenging a demanding audience This is where interactive programs shine

Instead of having information presented to them, children look for it at their own pace, much like an Easter egg hunt. You know the information is there so you can guide the children on their journey of discovery Sometimes they may not find all the information at one time and this is still OK – they will go back time after time and bump into information they didn't know was there.

Some programs offer guides to take the novice by the hand and show them the highlights of the subject matter and then allow them to roam and browse as if they were inside a museum or library Think of such programs as a database for you and your children. Specific fields of information and knowledge are available for the inquisitive mind Ask your children what they like and with a few exceptions, you should be able to satisfy their curiosity about their area of interest

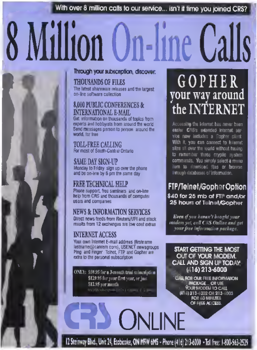
Don t dismiss seemingly un-educational software For example Electronic Arts' E.A Kids is a mystery game that puts the child in the role of a junior detective The program exercises a child s deductive reasoning and problem solving abilities A computer pal helps your child with clues and the victim rewards successful efforts with a "Thanks dude!" and other feedback.

Broderbund's "Where in ..." series covers geography, history and outer space. SimCity lets future urban planners decide where to put the mayor's office or university, and offers the ability to zone areas and charge taxes from your SimCitizens.

Kids in the Home Office

Is the computer your children use the same one that holds your important data and work? If you have ever fretted about your five year old wiping out tomorrow's presentation or (horrors) the entire hard drive, there's KidDesk by Edmark It sets out a desk specifically for your child or children when they turn on the computer bypassing DOS commands Once there, your children are presented with a list of their

Article continued on page 49
See page 46 for Software Listings



With over 8 million calls to our service... isn't it time you joined CRS?

8 Million On-line Calls

Through your subscription, discover:

THOUSANDS OF FILES
The latest shareware releases and the largest on-line software collection

8,000 PUBLIC CONFERENCES & INTERNATIONAL E-MAIL
Get information on thousands of topics from experts and hobbyists from around the world Send messages person to person around the world, for free

TOLL-FREE CALLING
For most of South-Central Ontario

SAME DAY SIGN-UP
Monday to Friday sign up over the phone and be on-line by 6 pm the same day

FREE TECHNICAL HELP
Phone support, free seminars and on-line help from CRS and thousands of computer users and companies

NEWS & INFORMATION SERVICES
Direct news feeds from Reuters/UPI and stock results from 12 exchanges are low cost extras

INTERNET ACCESS
Your own Internet E-mail address (firstname lastname@canrem com), USENET newsgroups Ping and Finger Telnet, FTP and Gopher are extra to the personal subscription

ONLY: $59.95 for a 3-month trial subscription
$129.95 for your first year, or just
$12.95 per month

GOPHER
your way around
the INTERNET

Accessing the Internet has never been easier CRS's extended Internet service now includes a Gopher client With it, you can connect to Internet sites all over the world without having to remember those cryptic system commands. You simply select a menu item to download files or browse through databases of information.

FTP/Telnet/Gopher Option
$40 for 25 mb of FTP and/or 25 hours of Telnet/Gopher

Even if you haven't bought your modem yet, call CRS Online and get your free information package.

START GETTING THE MOST OUT OF YOUR MODEM. CALL AND SIGN UP TODAY.
(416) 213-6000

CALL FOR OUR FREE INFORMATION PACKAGE... OR USE YOUR MODEM TO CALL (416) 213-6002 OR 213-6003 FOR 60 MINUTES OF FREE ACCESS.

CRS ONLINE

12 Steinway Blvd., Unit 24, Etobicoke, ON M9W 6M5 - Phone (416) 213-6000 - Toll free: 1-800-563-2529

NOV/DEC '94

OTA Notebook Centre

TEL: (416) 921-1177
FAX: (416) 921-8664

343 COLLEGE STREET (2 BLOCKS WEST OF SPADINA) TORONTO M5T 1S5

THIS MONTH'S SPECIAL

DX2/66 Notebook

With 4 MB RAM, 9½" D.S. colour screen, 260 MB Hard Drive, Built-in Trackball, Built-in Speakers and Sound Blaster— *the ultimate game machine!*

$3,195

BUSINESS HOURS
MON & SAT 10-6 • TUE - FRI 10-7

Scanner
Parallel, 2 lbs. 8½", 256 greyscale
$595

PCMCIA
Generic PCMCIA 14.4 kbps Fax Modem
$255

Multimedia
16-bit PCMCIA card
$425

Pocket
Ethernet Adapter (Combo)
$225

Generic PCMCIA
ETHERNET
$255

Ethernet Coax
16-bit ISA-bus
NE 2000 COMP
$59

Combo
16-bit, NE 2000 COMP
BNC/TP ISA-bus
$89

PCMCIA Installation
Yes! We can install your "plug & play" PCMCIA cards
call for pricing

XIRCOM ETHERNET

Pocket (TP)	$425
Pocket (Coax)	$425
Pocket (Combo)	$465
PCMCIA (TP)	$345
PCMCIA (Coax)	$345
PCMCIA (Combo)	$395

CD ROM Drive
for Notebooks 2x
$475

NEC 3XP
Portable CD ROM
$595

Adapter
Parallel to SCSI
1 MB/s
$295

Game Port
Parallel Adapter
$65

AST Bravo Series

w/ DOS, Windows, Trackball & PCMCIA, Local Bus

CPU	Video	RAM	HD	Price
486 SX/33	Mono	4	200	$2245
486 SX/33	Passive Col	4	200	$3145

Ascentia Series

CPU	Video	RAM	HD	Price
486 SL/33	Passive Col.	4	250	$3195

BONDWELL

With DOS & Fax Modem
**only 486DX/33 Mono with docking station*

CPU	Video	RAM	HD	Price
486 DX/33*	Mono	4	170	$2165
486 DX/33	Passive Colour	4	170	$2995

EPSON

486 w/ DOS & Windows and Mouse

CPU	RAM (MB)	HD (MB)	Price
486 SLC/33	4	170	$1995

Multimedia impulse

w/ DOS & Windows, Trackball, PCMCIA, 4 MB RAM, Sound, NiMH and 1 MB Video

Model	HD	CPU	Display	Price
PL815E	260	i486 SX/33	9.5" mono	$2345
PL815E	520	i486 SX/33	9.5" mono	$2745
PL815EC	260	i486 SX/33	10.3" DSTN	$3195
PL815EC	520	i486 SX/33	10.3" DSTN	$3535
PL825E	260	i486DX2/50	9.5" mono	$2445
PL825E	520	i486DX2/50	9.5" mono	$2845
PL825EC	260	i486DX2/50	10.3" DSTN	$3295
PL825EC	520	i486DX2/50	10.3" DSTN	$3695
PL825ECX	260	i486DX2/50	9.5" TFT	$4595
PL825ECX	520	i486DX2/50	9.5" TFT	$4995
PL835E	260	i486DX4/75	9.5" mono	$2895
PL835E	520	i486DX4/75	9.5" mono	$3295
PL835EC	260	i486DX4/75	10.3" DSTN	$3795
PL835EC	520	i486DX4/75	10.3" DSTN	$4195
PL835ECX	260	i486DX4/75	9.5" TFT	$5095
PL835ECX	520	i486DX4/75	9.5" TFT	$5495

For 340 MB, add $100 to the 260 MB prices

ACERNOTE

w/ 4 MB RAM, DOS, TracPoint, PCMCIA

Model	CPU	Video	HD	Price
735	486SX/33	Mono	210	$2595
735C	486SX/33	D.S. Col	210	$2885
760C	486DX2/50	D.S. Col.	340	$3445
760CX	486DX2/50	Act. Col	340	$4895
760CX	486DX4/75	Act. Col	340	$5695

AMS-5300 "The Scientist's Choice"

1 MB 32 bit Local Bus Video, AMI Flash BIOS, Built-in Optical Trackball, PCMCIA slots, DOS, Win.
** w/ NiCD † w/ NiMH*

CPU	Video	RAM	HD	Price
486 SX/33	Mono	4	170	$2695
486 DX2/50	Mono	4	170	$3095
486 DX2/66	Mono	8	500	$4195
486 DX2/66*	Mono	16	340	$4795
486 DX2/66*	Mono	16	500	$5095
486 DX2/66†	Passive Col	16	340	$5595
486 DX2/66†	Passive Col.	16	500	$5895
486 DX2/66†	Active Col.	16	340	$6395
486 DX2/66†	Active Col.	16	500	$6656

IBM ValuePoint

DESKTOP VLB SYSTEMS

3 YEAR ON-SITE WARRANTY

AND AST DESKTOPS

486 DX/33 w/ 4MB RAM, 340MB HD **$1995**
486 DX2/66 w/ 4MB RAM, 340MB HD **$2195**

Canon NOTEJET

486C/SX/33 Notebook w/ printer, 4 MB RAM, 200 MB Hard Drive, DSTN Colour, PCMCIA, trackball — only **$3795**

SAMSUNG

w/ Windows, Trackball, Carrying Case & PCMCIA

CPU	Video	RAM	HD	Price
486SX/25	Act.Colour	4	170	$3295

TOSHIBA

w/ DOS & Windows & Trackball

Model	HD(MB)	CPU	Display	Price
T1910	120	486 SX/33	Mono	$2095
T1910	200	486 SX/33	Mono	$2295
T1910CS	200	486 SX/33	Passive Col.	$3195
T1960CT	320	486 DX2/50	Active Col	$4675
T2400CS	250	486 DX2/50	Enhanced Col.	$4495
T2400CT	320	486 DX2/50	Active Col.	$5795
T4700CT	320	486 DX2/50	Active Col.	$7295
T4800	320	486 DX4/75	Active Col.	$7595
T6600	510	486 DX2/66	Active Col.	$8995

4 MB Memory Upgrade (generic)	$395
8 MB Memory Upgrade (generic)	$995
CD-ROM Internal SCSI-2 (for T6600)	$595

Raven / Panasonic Notebooks

Model	CPU	RAM	HD	Video	Price
Magic Rite	486 SX/25	4	200	Act.Col.	$3985
Magic Rite	486 SX/33	4	200	Mono	$3285
Magic Rite	486 SX/33	4	200	Pas.Col	$3745
Magic Rite	486 DX2/50	4	200	Act.Col.	$5345
Magic Rite	486 DX2/50	4	450	Act.Col	$6045
CF41	486 DX2/50	8	260	Act.Col	$5885
CF41	486 DX2/100	8	450	Act.Col	$7385

Accessories		w/ Notebook Purchase
4 MB Memory (SX33 / DX2/50)	$475	$445
4 MB upgrade (Magic Rite SX25)	$395	$375
Extra Battery (Magic Rite)	$225	$195
CD-Drive for CD-Note 128 MB	$625	$575

IBM ThinkPad

w/ DOS, TrackPoint, PCMCIA, Power Adapter & NiMH

Model	CPU	Video	RAM	HD	Price
360	486SL/33	Mono	4	170	$2695
360	486SL/33	Mono	4	340	$3395
360CS	486SL/33	D.S Colour	4	170	$3195
360CS	486SL/33	D.S Colour	4	340	$3795
360C	486SL/33	Active Colour	4	170	$3895
360C	486SL/33	Active Colour	4	340	$4495
360P	Pen486SL/33	D.S.Colour	4	340	$4695

Raven 24-pin Printers (unless noted)

RP-9105 (9 pin)	$199	PR-2465	$409
RP-2405	$266	PR-5606 (9 pin)	$489
RP 2406	$286	PR-2465Q	$589
RP-2420	$366	PR-2466	$689

Panasonic/Raven Slim Laser Printers

KX-P4400 w/ 1MB	$885	LP-418	$595
KX-P4410	$845	LP 410-1	$635
KX-P5400	$1095	LP-470 PS	$1096

Raven Fax Machines

RF 350	$425	RF-360	$525

OTA is an Authorized RAVEN Reseller

LEASING AVAILABLE! ask for details!

Toshiba
3401 External CD Rom
$595

CD-ROM 2x and Sound
Portable PCMCIA
$795

Lexmark Printers
Winwriter 100 Inkjet
$375
ExecJet IIC Colour
$495
1200 dpi Laser
$2095

DEC Laser
2 MB 300 dpi
PostScript Printer
Par/Ser/Appletalk,
1 year on-site warranty
Canon engine and toner
SPECIAL
$965

Canon Printers
BJ-10sx BubbleJet with sheet feeder
$309
BJ 200e BubbleJet with sheet feeder
$359
BJC 600 Colour
$739
BJC 4000 Colour
$739
LBP-430 Laser Printer
$785

HP Printers
HP DeskJet 540
$425
HP DeskJet 500C
$545
HP DeskJet 560
$765
HP 4L Personal Laser
$945
HP 4P Personal Laser
$1385
HP 4 600 dpi Laser
$1795

Now setting up a NETWORK in your office is as easy as 1-2-3!
Share your printers, peripherals, data, software and hard drives.

These complete 2-user network packages come with everything you need and are easy to install.

BOX 1 — **Microsoft**
2 Windows for Workgroups v3.11 add on
2 16 bit NE Ethernet cards
1 25 ft RG-58 Coaxial cable
2 50 ohm Terminators
$299

BOX 2 — NOVELL
2 Novell Personal Netware
2 16 bit NE Ethernet cards
1 25 ft RG-58 Coaxial cable
2 50 ohm Terminators
$299

BOX 3 — ARTISOFT
2 Lantastic AI v6.0
2 16 bit NE Ethernet cards
1 25 ft RG-58 Coaxial cable
2 50 ohm Terminators
$329

BOX 4 — ARTISOFT
2 Lantastic AI v6.0
2 Node Runner 2000 card (BNC)
1 25 ft RG-58 Coaxial cable
2 50 ohm Terminators
$429

We carry a full line of networking products such as Ethernet, Arcnet, 10 Base-T concentrator hubs, cables, connectors and tools.
Consult our network specialists for better solutions to set up a network in your office!

ALL PRICES ARE CASH DISCOUNTED AND SUBJECT TO CHANGE WITHOUT NOTICE

Early Reading Software

Title	Bailey's Book House	Reader Rabbit 1
From	Edmark Corp.	The Learning Company
Age	2 to 6	3 to 8
Comments	Charming characters, superb graphics and easy point and click interface highlight this delightful program. Good for hours of play. My first choice (will run on a 286. CD-ROM and Mac versions also available)	An evergreen classic updated to run under Windows as well as DOS. Graphics are a little dated and exercises lack some flexibility. Still a good choice (CD-ROM and Mac versions also available)

Early Math Software

Title	Millie's Math House	Math Rabbit	WordPerfect Main Street
From	Edmark Corp	The Learning Company	8 to 14
Age	2 to 8	4 to 7	Set objectives, enter Hall of Fame and view stats. Math for the older child need not be boring. I could have used Mental Math Tips when I was younger
Comments	A real gem for those of you with 286 and EGA. Has an overview of what each section is setting out to accomplish. Excellent learning and seldom boring. A must have (will run on a 286, also available on CD-ROM and Macintosh)	The circus is in town teaching your children Math. You can adjust the difficulty level as your child becomes more proficient at problem solving. Dated graphics (also available on CD-ROM and Macintosh) Mental Math	

Early Reasoning

Title	The Playroom	Sammy's Science House
From	Broderbund	Edmark Corp
Age	2 to 8	2 to 8
Comments	An oldie but a goodie. Great for introducing a very young child to the computer. The Treehouse is for older kids (six to nine) and includes an excellent music section (will run on slow IBM XT)	Early science companion to other Edmark programs. Excellent graphics, full sound support. Lots of positive feedback. Open ended activities. Vocal directions for pre schoolers.

Early Utility/Creativity

Title	KidDesk Family Edition	Kid Works 2
From	Edmark Corp	Davidson and Associates
Age	For the whole family	2 to 8
Comments	Computer novice? Kids know more than you? Scared the kids will wipe out your hard disk? Then this program is for you. Virtually idiot proof and the kids just love it.	Children are allowed to create stories, illustrate them, hear their stories played back to them by the computer. Can import artwork from other programs (also available on Macintosh and CD ROM)

Reader Rabbit

Continued on page 48

12/94

SUNIX INC.
COMPUTERS & ELECTRONICS
SERVING YOU SINCE 1978

3850 Steeles W. #5
(at Weston Rd.)
905-856-2222
Toronto Line 416-741-5258
Fax 905-856-3136
Mon-Fri 10am - 6pm
Saturday 10am - 4.30pm

2091 Markham Rd., #4
(North of Finch)
416-292-0588
Mon-Fri 10am - 6pm
Saturday Closed

PRICES (CASH DISCOUNTED) AND AVAILABILITY SUBJECT TO CHANGE.

Government P/Os accepted.

SMART SHOPPERS ... SHOP AROUND FIRST AND COME TO US LAST FOR BEST VALUE AND SERVICE !

PRINTER SALES
DOT-MATRIC
* Panasonic KXP2130.....$288.
24 Pin Colour Upgradable
INKJET
* Lexmark IIC, colour.....$478.
Unbelievable paths & price
* Canon BJC4000 colour$Call
Super quality speed & price
* Canon BJ200C.....$Call
Low cost near laser quality
LED/LASER QUALITY
* Panasonic KXP4400.....$619
4 ppm, 1 mb
* Panasonic KXP5400.....$1298.
4 ppm, 2 mb,Postscript
* OKI 410e.....$878.
4 ppm, 2 mb, 600 dpi
* OKI 410e/PS.....$1298.
4 ppm, 2 mb, 600 dpi, PostScript
* Canon LBP430.....$769
4 ppm, 1 mb, 300 dpi

SUNIX NOTEBOOK WITH CD ROM
* 486DX33 INTEL CPU
* 4 MB MEMORY
* 1.44 MB FLOPPY
* 120 MB HARD DRIVE
* TRACKBALL, PCMCIA
* DOUBLE SPEED EXT CD ROM
* DOS 6.2 AND WINDOWS 3.11
MONO COLOUR
$1998. $2848.
W/O CD ROM $1738. $2588

CD / MULTIMEDIA
* Double speed CD ROM.....$169.
* CD ROM controller.....$ 12.
* Ext. double speed CD ROM $349.
* Notebook adaptor.....$ 59
* Ext. CD ROM w/ adaptor.....$400
* Sound card bundle.....$ 79
(S.B. compatible card, mic, 1 CD, 2 speakers, CD interface)
* 16-B sound card bundle.....$119
(16 bit sound card, mic, 1 CD, 2 speakers, CD interface
* Multimedia kit.....$240.
(Double speed CD ROM and sound card bundle)
* 16-bit Multimedia kit.....$288
(Double speed CD ROM and 16-bit sound card bundle)
* Sound Blaster Discovery 16.....$call
* S.B. Digital School House.....$call
* S.B. (OEM) 16-bit MCD card..$149
* 6-CD Pack w/Encyclopedia.....$ 89

IDEAL UPGRADES GIFT ITEMS :
* 340 MB HARD DRIVE, QUANTUM...$298
* 428 MB HARD DRIVE, CONNER.....$318.
* 540 MB HARD DRIVE, MAXTOR.....$378.
* 1 MB SIMM MODULE.....$ 53.
* 4 MB SIMM MODULE.....$218.
* VLB MOTHER BOARD/128K, W/O CPU..$109
* INTEL CPU.....$CALL

VGA---TV CARD
Internal $58.
Display computer text & graphic on your T.V screen for business presentation, games, education and animation.

PC--T.V. ENCODER
External $275.00
* Flicker free windows applications on T.V
* Simultaneous monitor and T.V. viewing.
* Supports SVHS
* Perfect for Notebook.

PENTIUM 60/66/90 VLB/PCI
WE CUSTOM-MAKE TO YOUR EXACT REQUIREMENTS.
CALL FOR A QUOTE !

US Robotics Fax Modem
Int. Ext.
* 14.4K $158. $188
* 28.8K $298. $328
Serial Card w/16550 for High Speed
Ext. Fax/Modem $39.

NETWORKS for Home or Office
LANtastic Kit for 2 PCs
* 2 LANtastic 6.0
* 2 16-Bit Network Cards
* 1 25-ft Coax Cable
$335
* Each Add-on Kit $175

KEYBOARD PROBLEM ?
Trade-in your old keyboard (in any condition) for a brand new one for only
$30.00

Multimedia System
* 486dx2-66/128K, VLB
* 4 MB Memory
* 1.44 MB Floppy Drive
* 340 MB Hard Drive
* VLB Controller, I/O
* VLB Video Card, 1M
* 14" SVGA NI Monitor
* Mini Tower Case
* 101-Keyboard
* Serial Mouse
* Double-Speed CD-ROM
* 16-Bit Sound Card
* 2 Speakers
* 6-Titles CD Pak
* 2-year Labour and 1-Year Parts Warranty
Sale $1,738.

486DX2-66, V.L.B.
* Intel CPU 128K Cache
* 4 MB Memory
* 1.44 MB Floppy Drive
* 340 MB Hard Drive
* IDE Controller w/ I/O
* VLB Video Card, 1M
* 14" SVGA N.I. Monitor
* Mini Tower Case
* 101-Keyboard
* Serial Mouse
* 3-year Labour and 1-Year Parts Warranty
Sale $1,398.

SUNIX'S OFFERING AN "EXPERIENCE EMPHASIZED" "HANDS-ON COMPUTER TECHNIQUE COURSE"

IDEAL FOR COMPUTER ENTHUSIASTS, NEW GRADUATES, ENTREPRENEURS TO-BE, AND NEW IMMIGRANTS DESIRING FOR THE REQUIRED WORKING EXPERIENCE DEMANDED BY MOST EMPLOYERS, OR ADAPT IT AS A HOBBY

THE COURSE RUNS 5 CONSECUTIVE SATURDAYS (3HRS PER DAY). FEES: $295
CALL (416) 292-0588 FOR MORE INFORMATION

ACCESS Business Centre

(416) 630-3497
955 WILSON AVENUE, UNIT 3,
DOWNSVIEW, ONTARIO. M3K 3A8

CAD/ CAM

HP DesignJet 650C

Colour Inkjet Plotter
D- and E-size models
Vibrant 300-dpi colour output (CMYK)
4-mb buffer expandable up to 20 mb
Automatic I/O sensing for multiple host connections
Options
HP JetDirect cards for flexible connectivity
Adobe Level II Postscript upgrade kit
Macintosh interface kits for direct connection

ACCESS PENTIUM 90 SYSTEM

- Intel Pentium 90 with fan
- PCI Local Bus, 256 cache
- 16MB RAM, 540 MB HD
- PCI Local Bus IDE I/O
- 2 MB PCI local bus video
- Mid tower, 1.44MB floppy
- 17" SVGA monitor .26 NI, low radiation, EPA
- Keytronics 101 Enhanced keyboard
- Logitech mouse - 3 button ergonomic with pad
- DOS 6.2, Windows 3.11
- 2 Year Warranty

CAD STATION
$4095

AUTOCAD RELEASE 12 ... $600

WIDEFAX 36" Modular

-FAST FAX less than 60 sec.
-FAST COPY less than 30 sec.
-Archive old drawings
-Integrate to AutoCAD
-Refresh and update old drawings

ASK ABOUT OUR BLUEPRINT SCANNING SERVICE

NETWORKS

LANTASTIC STARTER KIT
COMPLETE SYSTEM TO NETWORK TWO COMPUTERS
- 2 GVC 10 BT combo ethernet cards
- 2 copies Lantastic 6
- Cables and connectors

$299

MISSION CRITICAL ? YOU NEED THE COMPAQ PROLIANT 4000

Up to four 486/50 or Pentium 66-MHz
64MB Advanced ECC RAM exp. to 512MB
Integrated Fast-SCSI-2 Controller
Ten stroage device bays
Seven external hot-pluggable drive bays
Integrated Controller & CD-ROM
Compaq SMART SCSI Array Controller
Network OS Support: Netware, UNIX, NT, VINES, LAN Manager, OS/2

D-Link 10BT ETHERNET CARDS **$99**

NOVELL SUCCESS PROFILES
We have successfully integrated Novell Networking Systems in Financial, Manufacturing, Engineering and Police Institutions. Let ACCESS install your Novell network and create your own success profile.

SALES AUTOMATION

Cutting-edge communication tools are more essential than ever in today's fiercely competitive world. To stay on top, you've got to stay in touch with the technology that will keep you there...

ZENITH Z-NOTEFLEX

Modular processor SX33 DX50 DX4/75 or DX4/100
Removeable screen mono/dual scan/active
Swappable hard drive (200/340/450/520)
Interchangeable battery and floppy
Integrated 16 bit sound card
3 year warranty

ACCESS Mobile Package

Z-NOTEFLEX
DX2/50 Dual scan passive
*MEGAHERTZ 14.4 Cellular Fax/Modem & Land Line
ACT 2.0 Contact Management
MITSUBISHI 3500 Cellular phone

PURCHASE OR LEASE ? TAKE 3 MONTHS TO DECIDE...
$5850
Lease from $204 /mo

ZENITH Z-PLAYER

Fully integrated multi-media
Connects to any notebook
Plays audio & optical disks
Integrated 16 bit sound
$750

COMPAQ LTE ELITE 4/50 CX

50MHz 486SL Enh
Enhanced EasyPoint Trackball
SmartStation expansion options
MiniStation expansion options
8MB RAM exp. to 24MB
Built-in AC Adapter
PCMCIA support
Active Matrix Colour VGA
Power conservation features
340 MB HD

Transform ordinary presentations into multimedia events with compelling audio, video, computer data and CD ROM support

3M 6450 PROJECTION PANEL

Active matrix TFT Colour
Broad computer compatibility
Global video compatibility with NTSC,PAL,SECAM
Computer and video audio control
16.7 million colours
Accepts direct video
Automated setup
VirtualMouse remote control

$ CALL

FREE 3M 9200 PROJECTOR WITH PURCHASE

The possibilities are limited only by your imagination.

PRINTING SERVICE

PRINTS UP TO 36" x 110'

LET US DO YOUR LARGE FORMAT COLOUR PRINTING

FROM MAC OR PC FILES, NEGATIVES, CD-ROM & PHOTOGRAPHS

Posters
Banners
Trade Show Signs
Point of Purchase
Presentations
Displays
Maps
Back Lit Signs
Retail Signage
Computer Art

Display Maker lets you print all your extra large colour output with ease.

Big Color projects may be created in Macintosh and PC applications, or taken directly from photographs, negatives, or CD-ROM

The Big Color Display Maker is limited only by your imagination...

Big Color DisplayMaker

CALL LAURA EXT. 230 OR ELLEN EXT. 226

ACCESS PENTIUM 60 GRAPHICS SYSTEM

Intel Pentium 60 with fan
PCI Local bus, 256 cache
16MB RAM 730MB HD
PCI Local bus IDE I/O
2MB PCI Local bus video
Mid tower, 1.44MB floppy
17" SVGA monitor .26 NI Low radiation, EPA
Keytronics 101 enhanced keyboard
Logitech mouse - 3 button ergonomic with pad
DOS 6.2 Windows 3.11, COREL DRAW! 4.0
Microtek Scanmaker IISP Adobe PhotoShop LE
Double-spin CDROM sound card/ controller
Options Syquest 88MB Removeable Hard Disk

$5495

COREL DRAW! 3, 4 & 5 $ CALL

GRAPHICS

MICROTEK ScanMaker III

36 bit colour scanner
Optical resolution 600X1200
2400 DPI through software
Single pass
Includes full version Adobe PhotoShop
DCR (Dynamic Colour Rendition) calibration/correction system

FARGO PRIMERA PRO

Dye Sub./Wax Thermal Transfer Printing
A, A4-size prints
Mac or PC
600X300 DPI
Optional:
Adobe Postscript Level II software package
$2195

MAG 21 MONITOR
1600x1280 **$2849**

MICROTEK ScanMaker II

24 bit colour scanner
8 bit greyscale/ single bit black
Optical resolution300X600
1200X1200 DPI through software
Includes LE Adobe PhotoShop
$895

LEXMARK 4079

Postscript 11"X17"
CMYK
4MB RAM to 16MB
360X360 DPI
Pantone - Licenced colour
Colour balancing
Mac or PC

$2995

OA Comp

991 Matheson Blvd, E,
Unit 8, Mississauga, Ont, L4W 2V3
Tel : (905) 629-3333 Fax (905) 629-3323
(SW Corner of Tomken and Matheson)

GRAND OPENING SPECIAL !!!

The #1 Computer Seller in Edmonton now expands and dedicated to serve Mississauga

486DX-33 Only $1390
486DX2-66 Only $1460

Includes

- VESA Local Bus Mother Board w- 128K Cache
- Intel CPU
- 4MB RAM
- VESA IDE Controller
- VESA 1M Video Card
- 420 MB Hard Disk
- Panasonic 1.44MB Floppy Drive
- Mini Tower
- 14" .28 NI Monitor
- Enhanced 101 Keyboard
- Mouse
- Dos & Window
- 1-year parts & 2-year labour

Come to visit us for other configurations !!!

All prices quoted are cash discounted and subject to change without notice
We reserved the right to limit quantities

CANADA
[illegible]

USA
[illegible]

HONG KONG
[illegible]

TAIWAN
[illegible]

Children's Software

Older Children's Software

Title	Super Solvers Gizmos and Gadgets	KidCAD
From	The Learning Company	Davidson and Associates
Age	7 to 12	7 and up
Comments	Fascinating program that encourages understanding of basic science principals, mechanics and experimentation. 200 progressively difficult puzzles and simulations to entertain (will run on a 286)	Like Lego? Ever thought of being an architect or building your own house? Simply hours of fun from a comprehensive menu of everything you need (and some things you never would have thought of) to build your dream house (also available in Macintosh and CD-ROM)

Title	Student Writing Center	Eagle Eye Mysteries
From	The Learning Company	EA*Kids
Age	10 to adult	8 and up
Comments	Think of all those nights you spent up with your typewriter, typing and retyping your report due the next day. No more. This program is absolutely amazing for its depth and breadth considering it can be used by a 10 year old. Pre-formatted documents, grammar checker, bibliography maker, etc. all in one.	Team up with Jake and Jennifer and nab crooks in Richview. Over 50 cases on file. Get your picture on the front of the Richview Courier for your efforts

➤

123 COMPUTER WAREHOUSE INC. 150 QUEEN ST EAST UNIT 2, BRAMPTON ONT L6W [illegible], TEL (905)453-6769 FAX (905)453-5861

[illegible]

486 SX33 SYSTEM
$ 1392.00
INTEL CPU
VESA LOCAL BUS MAIN BOARD GREEN FEATURED
128 KB CACHE RAM
4 MB SIMM RAM
420 MB HARD DRIVE
1.44 MB 3.5 FLOPPY DRIVE
IDE VESA LOCAL BUS I/O CONTROLLER
2 SERIAL, 1 PARALLEL, 1 GAME
1 MB VESA LOCAL BUS VIDEO CARD
14" SVGA NI .28DPI COLOUR MONITOR, GREEN FEATURED
MINI-TOWER CASE W/230 WATT CSA POWER SUPPLY
101 ENHANCED KEYBOARD
M.S. DOS V6.2 WITH MANUALS
M.S. WINDOWS V3.1 WITH MANUALS
FREE MOUSE AND MOUSE PAD
3 YEARS LABOUR, 1 YEARS LIMITED PARTS [illegible] WARRANTY
UPGRADABLE TO 486DX,P24T

486 DX33 SYSTEM
$ 1554.00
INTEL CPU
VESA LOCAL BUS MAIN BOARD GREEN FEATURED
128 KB CACHE RAM
4 MB SIMM RAM
420 MB HARD DRIVE
1.44 MB 3.5 FLOPPY DRIVE
IDE VESA LOCAL BUS I/O CONTROLLER
2 SERIAL, 1 PARALLEL, 1 GAME
1 MB VESA LOCAL BUS VIDEO CARD
14" SVGA NI .28DPI COLOUR MONITOR, GREEN FEATURED
101 ENHANCED KEYBOARD
MINI TOWER CASE W/230 WATT POWER SUPPLY CSA APPROVED
M.S. DOS V6.2 WITH MANUALS
M.S. WINDOWS V3.1 WITH MANUALS
MOUSE AND MOUSE PAD
3 YEARS LABOUR, 1 YEARS LIMITED PARTS [illegible] WARRANTY
[illegible] UPGRADABLE
UPGRADABLE TO 486DX2/50 OR 66, P24T

486 DX2/66 SYSTEM
$ 1799.00
INTEL CPU W/FAN
VESA LOCAL BUS MAIN BOARD GREEN FEATURED
256 KB CACHE RAM
8 MB SIMM RAM
420 MB HARD DRIVE
1.44 MB 3.5 FLOPPY DRIVE
IDE VESA LOCAL BUS I/O CONTROLLER
2 SERIAL, 1 PARALLEL, 1 GAME
1 MB VESA LOCAL BUS VIDEO CARD
14" NI .28DPI COLOUR MONITOR, GREEN FEATURED
101 ENHANCED KEYBOARD
MINI TOWER CASE W/230 WATT POWER SUPPLY CSA APPROVED
M.S. DOS V6.2 WITH MANUALS
M.S. WINDOWS V3.1 WITH MANUALS
MOUSE AND MOUSE PAD
3 YEARS LABOUR, 1 YEAR LIMITED PARTS [illegible] WARRANTY
P24T UPGRADABLE

COMPLETE PC SYSTEMS SALES, SERVICE AND TECHNICAL SUPPORT

SERVING THE CONSUMER SINCE 1987

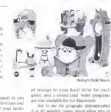
PENTIUM 66MHZ
$ 3229.00
INTEL CPU W/FAN
PCI MAIN BOARD
[illegible] KB CACHE RAM
[illegible] MB SIMM RAM
[illegible] MB SCSI HARD DRIVE
1.44 MB 3.5 FLOPPY DRIVE
[illegible] SCSI CONTROLLER CARD W/UART CHIP
2 SERIAL, 1 PARALLEL, 1 GAME
1 MB PCI VIDEO CARD
15" NI .28DPI COLOUR MONITOR, GREEN FEATURED
101 HONEYWELL ENHANCE KEYBOARD
MEDIUM TOWER CASE W/230 WATT POWER SUPPLY
M.S. DOS V6.2 WITH MANUALS
M.S. WINDOWS V3.1 WITH MANUALS
MOUSE AND MOUSE PAD
3 YEARS LABOUR, 1 YEARS LIMITED PARTS [illegible]

Merry Christmas and a Happy New Year

PENTIUM 90MHZ
$ 3995.00
INTEL CPU W/FAN
PCI MAIN BOARD
[illegible] KB CACHE RAM
16 MB SIMM RAM
[illegible] SCSI HARD DRIVE
1.44 MB 3.5 FLOPPY DRIVE
PCI SCSI CONTROLLER CARD W/UART CHIP
2 SERIAL, 1 PARALLEL, 1 GAME
1 MB PCI VIDEO CARD
15" NI .28DPI COLOUR MONITOR, GREEN FEATURED
101 HONEYWELL ENHANCE KEYBOARD
MEDIUM TOWER CASE W/230 WATT POWER SUPPLY
M.S. DOS V6.2 WITH MANUALS
M.S. WINDOWS V3.1 WITH MANUALS
MOUSE AND MOUSE PAD
3 YEARS LABOUR, 1 YEAR LIMITED PARTS [illegible] WARRANTY

Children's Software

Continued from page 44



Bailey's Book House

programs only For pre-schoolers pictures are included to eliminate confusion

It also features options such as e-mail for the family, messages on answering machines and the ability to customize family members' desks. Sure beats worrying if your hard drive will still be there when you get home from work

Shopping Tips

Try choosing a subject that appeals to you — your interest is ultimately infectious and will rub off on your child If your tastes clash maybe it is a good time to try to understand your child's taste in games by experiencing what he or she is interested in (you may even learn a thing or two)

For those of you venturing out to pick up a program for your children you'll soon discover that if you don't have a CD-ROM drive-equipped computer you may miss some very good titles However, none of the programs in this roundup require a CD-ROM drive although many are also available in CD ROM format

Minimum requirements for these programs are a 386/16 MHz CPU or better (although some will run on a 286) color monitor 640K RAM (Random Access Memory) MS-DOS 3 to or later Microsoft compatible mouse 3.5 floppy drive sometimes Windows 3.1 approximately 10 MB of storage in your hard drive for each game, and a sound card Some programs are also available for the Macintosh

Ask to see the programs demonstrated if at all possible (some stores allow you to do this) Make sure the system requirements match your own there's nothing like opening a package and finding that you cannot run it (and not being able to return it) ❑

Contacts

Broderbund Software Inc	415-382 4400
Davidson & Assoc Inc	310 793 0600
Edmark Corp	206-556-8484
EA*Kids	1-800-543-9778
Maxis	510-245-9700
Microsoft Canada	1-800-548-6653
The Learning Company	1 800-852-2255
WordPerfect	1-800-451-5151

SAVE $600
PUT US ON YOUR PAYROLL

Buy one of the most versatile payroll programs on the market plus one year of tax updates and save $600

CP100 Paycheq Controller full running demo .... free

For your free demo, call **1-800-667-3369**
Aslan Microsystems Inc
2146 Sherwood Cr Abbotsford BC V2T 1B8

Product available on MS-DOS Networks, UNIX, and Xenix

Offer expires January 31 1995

COMING NOVEMBER 15th
OVER DOOM LOAD
THE ULTIMATE DOOM COLLECTION ON CD-ROM

900+ LEVELS
PATCHES 1,2 & 1.666
SOUND & GRAPHIC FILES
EDITORS & MENUS

LIMITED EDITION OFFER $29.95 + TAX REG. $39.95

FOR RETAIL & DISTRIBUTION PLEASE CONTACT
MURAVALL SYSTEMS & DESIGN
P.O. BOX 5844, STATION A
TORONTO ONTARIO M5W 1P5
TEL (416) 537 3190

FOR MAIL ORDER & DIRECT SALES PLEASE CONTACT
R. H. PLOTTER & COMPUTER SUPPLIES
5644 BAYVIEW AVE., SUITE 1100
TORONTO ONTARIO M4G 3C2
TEL. 1-800-263-3177 FAX 1-400-263-5456

WONDER COMPUTERS INC
Canada's Home of Amiga!

Ottawa (613) 596-2542
Toronto (416) 286-0001
Montreal (514) 279-0002
"Will the Wonders Never Cease?"

December Specials!!
Announcing the World's first ever Software-based Windows Emulation for the Amiga!
PC-Tasks 3.0... Just $189
Hydra Ethernet Card... Just $349
See us for all your VIDEO TOASTER & Multi-Media requirements

SPECIAL BONUS!
The Gage Canadian Dictionary included
FREE!

Explore Your Country! NEW!
The Canadian Encyclopedia for your PC or Mac!

Are you ready for your next school or business project? Need quick access to volumes of information about Canada?

Now you can have The Canadian Encyclopedia on your Windows™-based PC or Apple Macintosh! And you won't need expensive CD-ROM options to make it work! It's the desktop encyclopedia of choice for the entire Ontario public school system. Everything you need to know is right at your fingertips! Canadian History Art Culture Politics Sports Law Science and Technology. It's all there on your computer Investigate with **Explore**, an interactive search and enquiry database engine. Zero in on exactly what you need. Accessing information has never been this easy or this much fun!

To make this package an even greater value The Gage Canadian Dictionary is included on the diskettes **ABSOLUTELY FREE!**

Whether you're a bright student or a busy professional this information will take you to the top of your class The Canadian Encyclopedia (with regular upgrades) gives you the most current and accurate information available To find out more or to purchase your copy, call or drop in at one of the following fine retailers

- A Plus Software • CompuSmart
- Videoflicks • Computer City • Compucentre

McClelland & Stewart The Canadian Publishers

M&S

MAKES A GREAT CHRISTMAS GIFT!
SUGGESTED RETAIL PRICE
$99*

CHRISTMAS

Be Really Original This Christmas Try Computer Books

BY ROSS MACDONALD

Paper is not dead. It hasn't even been ill.

Cellulose Rules, O.K?! Contrary to popular belief people who own computers are often as enthusiastic about building up a good reference library as they are about their software — largely because they have to be

Of course, just about any good software package comes heavily saturated with documentation and built in "Help" screens But for some ill defined reason it's all too often left to third party publishers to clarify an application's myriad abilities in plain, comprehensible language Fortunately these unaffiliated publishers are not averse to defining a product's limitations or problems, either In fact it's a very good idea to buy a third-party book before forking over the prerequisite hundreds of dollars that many applications demand It's a good way to be sure it'll do what you want it to

Vital stats on the publishers are provided but you'll likely be able to get anything that tickles your fancy from a reputable book seller

General

Make Money With Your PC! (Ten Speed Press) An obvious first choice for this list based on the title alone Written by computer biz whiz Lynn Walford this 120 page paperback covers just about all the bases intimated by the title But the caveat is that it's all presented in a verrrry basic fashion

Suggestions for businesses to get into, for example constitute several lists covering about 165 possibilities ranging from accounting through copy editing and even educational consulting Unfortunately, there aren't any hints about how to actually get such jobs, though I suspect more than simply owning your own PC is required But it's nice to know that we could do such jobs on our computers if only we could get somebody to pay us for it

Other topics include choosing equipment, how to set up an office and marketing and management techniques all outlined in the same uncomplicated style There are, however some resource lists at the back that might actually prove useful At $7.95 this might better be called "Make Money With Your Publisher" Covers both IBM compatible and Macintosh computers

For Beginners

A Free Guide to Buying Your First PC an easy fortifier for stockings with anticipated anaemia. This is the stuff of great dramatic theatre The Crockers—Archie and Marj with their kids Orville and Patti (and let's not forget Archie's mum in law Virginia)

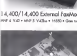
➤

You may not buy it now . . .
But think about your future & upgrade your computer Knowledge

Pro-Nets DSP technology **SoftCom Voice/Fax/Modem** and **SpeedCom Fax/Modem** will meet all you need.

SPEEDCOM FAX/MODEM

14,400/14,400 External FaxModem
MNP 4 V.42 • MNP 5 V.42bis • 16550 • Goes to 19 200



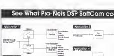
14,400/14,400 Internal FaxModem
MNP 4, V.42 • MNP 5 V.42bis • 16550 • Goes to 19 200

SOFTCOM VOICE/FAX/MODEM

**UPGRADE YOUR COMPUTER KNOWLEDGE
THINK SOFTMODEM TECHNOLOGY
THINK UPGRADABILITY**

SoftModem Technology is a revolutionary approach to integrating PC and modem applications SoftModem Technology will allow fast support and future upgrades through software without requiring any hardware changes SoftModem Technology permits this because it uses a RAM-based DSP (Digital Signal Processor) architecture instead of an EPROM based system. This design reduces the overall system cost by using on-board RAM and integrating formerly separate hardware functions into a single piece of DSP code.

See What Pro-Nets DSP SoftCom can do?



Dealer inquiries welcome
We carry the whole line:
- MiniTower Case with LCD display• Unique source
- Instant Eprom Eraser Unique source
- DSP Fax/Voice/modem
- Traditional Fax/Modem
- Traditional Voice/Fax/Modem
- Motherboard 486/Pentium
- Enhanced Multi I/O VGA Interface
- We have 20 years of Hardware Design and Product Manufacturing experience in Taiwan and 1 year in Ontario

Trison Electronics Technologies
1350 Matheson Blvd East, Unit 9
Mississauga, Ontario, L4W 4M1
(Dixie Road & Matheson Blvd)
Tel: 905-238 9251
Fax 905-238-6822
Voice/Fax Auto Detect Line 905-238-1613
Monday to Saturday 9am-6pm

Trison Electronics Technologies

— all set out to buy their first computer. This 21 page booklet reads like a radio-play as the Crockers argue the pros—no cons, naturally — of making that fearsome investment. Orville and Patti are every parent's dream ... so articulate ... so sensible, and in the end every age group, every interest, every motivation is appeased. If you like the sound of this so far, you probably need it. Get it FREE from Compaq Canada, 1 800-567-1616.

The 10 Minute Guide to Buying a Computer (Que) an introduction to the entire process of buying a computer broken down into multiple "10 minute lessons." Includes plain English explanations of terms, what equipment will meet your needs, etc. etc. etc. Tailored to the technophobic set. $10.99

The Home Computer Companion (Que) After spending your ten minutes (and money) buying the thing, you'll want this nifty guide to help you get the computer out of the box, plugged in and running. Contains basic tips on getting going as well as suggestions for getting the most out of your new machine. $22.95 will feel like nothing if you've made your purchases in the anticipated order.

The Complete Idiot's Guide to DOS and ***TCIG to Multimedia*** (Que) Remember those halcyon days of the 60's and 70's when you tooted around in your VW Microbus, secure in the knowledge you were prepared for anything because "The Complete Idiot's Guide to Volkswagens" was crammed in the glove box? Now we have an endless supply of "idiot" manuals for the digitally challenged abounding with typical '90s overkill. Still, they're an adequate source of basic information for beginners through intermediate level users. $16.95 (DOS), $19.95 (Multimedia)

For Dummies Books (IDG Books), the insidious series that got everyone happily admitting to their embarrassing inadequacies openly. Written in an amiable — if not humorous — manner, the whole series is founded on basic explanations and instructions on how to maneuver around in your application of choice. Perhaps you know an avid collector or somebody who just somehow seems "right" for these books. They're up to a whopping 60 titles at this point so something's gonna fit. Prices vary but they all hover around $19.95. The eight newest titles in this burgeoning series are:

Pagemaker 5 for Windows
More Excel 5 for Windows
1-2-3 for Windows 5, 2E
1-2-3 for Windows 5 (Quick Reference)
Excel 5 for Macs
C, Volume 1
M-S Office 4 for Windows
Word 6 for Macs

1-2-3 for Windows Cheat Sheet (Que) Obvious. Useful. The newest in a series. $19.95

Macintosh

How To Practice Safe Macs (Peachpit Press) tips, suggestions, strategies and solutions exclusively for the Mac owner. Also includes help on preventing, detecting and recovering from security failures. Ostensibly written for non techies. $23.95

➤

Unlimited Storage!
OPTICAL Drives
FUJITSU 230MB 3.5"
PINNACLE MICRO 230MB 3.5"
2X 3X & 4X CD-ROM Drives
Multimedia for Today & Tomorrow
No One Makes It This Easy!
Sun Moon Star
Sony 33A 2X Drive
Reel Magic
More CD-ROMs
adaptec
IDE & SCSI HARD Drives
Quantum
Maxtor
Seagate
FUJITSU
FAST
BARRACUDA Drives
PINNACLE MICRO
RCD-1000 Double-Speed/1MB Cache CD Recorder
Pioneer 602X 6-Disc Double-Speed $ 699
Pioneer 604X 6-Disc Quad-Speed $ 1699
Pioneer 1004X 18-Disc Quad-Speed $ Call
TECH TIP
IOMEGA
Canada's Storage Experts Offer You More
All-Canadian Worry-Free Warranty
30 Day Money-Back Guarantee
Unlimited FREE Technical Support for ALL Our Products
Fast Delivery Anywhere in Canada
Government-Approved Supplier
6 Years Experience Serving ALL Your Storage Needs
MICRO DRIVES CANADA
Phone:
Fax:
BRAMPTON
VISA
NEW
Expanded Service from Canada's Storage Experts!
Lost Your Hard Drive Setup? Need Jumper Settings? Heads & Cylinders? Why wait on Hold? Call...
TECHLINE (900)451-3036*
MULTIMEDIA MONTH
DECEMBER ONLY
OPEN 7 DAYS A WEEK!
Mon. to Fri. 9am-6pm
Sat. 11am-5pm / Sun. Noon-5pm
$329
SUN MOON STAR PRO KIT DE LUXE
SUN MOON STAR PRO KIT
$379
CREATIVE LABS GAME BLASTER CD 16
2X CD-ROM
$529
$349
CREATIVE LABS DISCOVERY CD 16
NEC MultiSpin 2Vi KIT
$299
NEC Deluxe 2Vi KIT
$479
$429
CREATIVE LABS SCHOOLHOUSE CD 16

The Little System 7 1/7.5 Book (Peachpit Press) If you know what the title says you could probably use this book Takes Mac owners through the operating system right from basics—using the Finder and working with icons, to the sophisticated stuff—networking and troubleshooting, using PowerTalk and QuickDraw GX A handy little stocking stuffer for your favourite Mac hacker $13 95

Macworld System 7 5 Bible and ***Filemaker Pro 2 0/2 1 Bible*** (IDG Books) alternate guide books to those from other publishers offering the usual array of short cuts insider's tips and helpful hints for the beginner through advanced user Filemaker Pro Bible $34 95 System 7 5 Bible $29 95

Premiere With a Passion 2nd edition (Peachpit Press) another Mac based book, this time explaining the labyrinthine Premiere—Adobe's movie and video programme Packed with tips and guidelines for digitizing sound, assembling and editing projects, creating titles and graphics, adding transitions and special effects and editing and superimposing clips This book will be well appreciated by the basement Spielberg of the family $34 95

The Illustrator 5 0/5.5 Book (Peachpit Press) Adobe's propensity for creating exceptional software is equalled only by their inability to explain it Hooray for third party publishers! If you've ever used Adobe Illustrator or are foolishly contemplating it, buy this book. $29 95

PRE Christmas SALE
We Find The Trade-Off For You

486-66MHZ
$45.56 PER MONTH*
$1,299.88
IBM 486 CPU with 64K cache (VL-BUS Motherboard)
4MB RAM (Exp 16MB)
420MB IDE Hard Drive
TRIDENT 9400CXi VESA LOCAL BUS Card with 1MB DRAM
Super IDE I/O Interface
FUJITSU 1.44 Meg Floppy Drive
14" ACER UVGA Monitor .28 NI 1024x768 Green
Mini Tower Case
BTC Enhanced 101 Keyboard
LEADGEN 3-Button Mouse
MS-DOS 6.2x With Disk & Manual
2 Year Parts & Labour Warranty

14400 BPS FAX MODEM
14 4K Send & Receive Fax
Fax & Modem Software
5 Years Warranty
$99.88

CANON BJ-100 BUBBLE JET PRINTER
360x360dpi
BUILT-IN SHEET FEEDER
2 Years Warranty
$328.88

PENTIUM MOTHERBOARD
60MHz 256K Cache
PCI Intel Chip Set
$1,120.88
90MHz 256K Cache
PCI, Intel Chip Set
$1,588.88

PENTIUM-90
$139.40 PER MONTH*
$3,999.88
INTEL Pentium CPU with 256K cache
8MB RAM (Exp 192MB)
730MB WESTERN DIGITAL 10ms 128K Cache Enh IDE
ATI Mach 64 PCI Graphics Accelerator with 2MB VRAM
PCI Fast IDE Interface
SONY 1 44 Meg Floppy Drive
17" ACER Flat Screen Monitor 1280x1024 MPRII
Mid Tower Case
HONEYWELL Enhanced 101 Keyboard
LOGITECH 3-Button Mouse
MS-DOS 6 2x & WINDOWS 3 1x With Disk & Manual
2 Year Parts & Labour Warranty

RAVEN LP410 LASER PRINTER
300x300dpi
1MB Memory
4 Page Per Minute
2 Years Warranty
$598.88

PANASONIC 562B DOUBLE SPEED CDROM
300KB/Sec Transfer
320MS Access Time
64K Cache
with Controller
$168.88

SPEAKER
Big Speakers
AMPLIFIED
$28.88

PENTIUM-60
$104.16 PER MONTH*
$2,988.88
INTEL Pentium CPU with 256K cache
8MB RAM (Exp 192MB)
540MB WESTERN DIGITAL 11ms 256K Cache Enh. IDE
ATI Mach 64 PCI Graphics Accelerator with 2MB DRAM
PCI Fast IDE Interface
SONY 1 44 Meg Floppy Drive
15" ACER Flat Screen Monitor 1280x1024 MPRII
Mid Tower Case
HONEYWELL Enhanced 101 Keyboard
LOGITECH 3-Button Mouse
MS-DOS 6.2x & WINDOWS 3 1x With Disk & Manual
2 Year Parts & Labour Warranty

AOC 15" MONITOR
15" UVGA 1280x1024
28 NI MPRII
Digital Display
$468.88

MATH CO-PROCESSOR
387DX 25MHz
387DX-33MHz
387DX-40MHz
$45 EA.

EPSON STYLUS COLOUR INK JET PRINTER
720x720dpi Colour
4 Page Per Minute
2 Years Warranty
$798.88

486DX2-66
$59.20 PER MONTH*
$1,688.88
INTEL 486 CPU with 128K cache
4MB 72 Pin RAM (Exp 96MB)
426MB WESTERN DIGITAL 12ms 128K Cache Enh IDE
ATI Mach 32 VESA Graphics Accelerator with 1MB DRAM
32-bit VESA Fast IDE Interface
SONY 1.44 Meg Floppy Drive
14" ACER UVGA Monitor .28 NI 1024x768 Green
Mid Tower Case
HONEYWELL Enhanced 101 Keyboard
LOGITECH 3-Button Mouse
MS-DOS 6.2x & WINDOWS 3.1x With Disk & Manual
2 Year Parts & Labour Warranty

ACER 14" MONITOR
UVGA Monitor
28 Non-Interlace
1024x768 Green
$309.88

ACER 15" MONITOR
0.28mm, Flat Screen
NI L.R. Green Monitor
with Digital Controls
1280x1024
$479.88

ACER 17" MONITOR
0.27mm, Flat Screen
NI L.R., Green Monitor
with Digital Controls
1280x1024
$929.88

C&T COMPUTECH
Price are already cash discounted Prices, available subject to change without notice Shipping and Taxes Extra
* Lease payments are based on 36 month term

MARKHAM
7800 Woodbine Ave. Unit 114
(Woodbine & 14TH)
Tel (905) 470-8823
Fax (905) 470-1312
Mon to Sat 10am - 6pm

The Illustrator 5 0/5 5 for Macintosh Visual QuickStart Guide (Peachpit Press) as above but with differences clearly explained in the title $17 95

Internet

Point and Click Internet (Peachpit Press) a guide to the Internet for Mac users only Lots of instructions lots of illustrations. Cheap at $12 95

What's On The Internet, Winter 1994/95 (Peachpit Press) another contribution to America's latest fixation There are about 23 million drivers on the Infobahn these days so you'd better get some sort of map or you'll miss your exit. Included is a 3 400 word subject index, a list of more than 7 000 Internet newsgroups with a brief rundown on each and answers to "the 21 000 most frequently asked questions" (though how frequently you can ask that many questions remains a mystery! You also get a coupon for a free Mac/PC disk for easily finding groups using a keyword directory All for $19 95

Technical

Networking Illustrated (Que) a pictorial insight into how networks work Lotsa pictures loadsa tech tips and a heap o clear explanations Spans LAN, MAN and WAN $24 99

Insider's Guide to Software Development (Que) for the real technophile on your list. A behind the-scenes look at how the software industry produces all that stuff through first-hand experiences and personal anecdotes Written by Paul Perry — ex of Borland International, and Keith Ermel — equally ex of Peter Norton Computing This is at least an interesting read for anyone wondering why five diskettes and an incomprehensible manual often costs 550 bucks Fortunately the book is only $24 99

Easy Programming with QBAsic and ***Easy Programming with C*** (Que) If the titles of these two books don't put you off, maybe you'd like to read them. $24 99 (each)

Heavy Metal Visual C++ Programming (IDG Books) not recommended for Christmas giving unless your intended is a total nerd $39 95

You can be sure there are a million more titles out there but these are all new releases and will get you started. Ask for a catalog when you contact any publishers. ❑

Contacts

Ten Speed Press
1-800-841-2665

IDG Books Worldwide
(415) 312-0614

Que
1-800-428-5331

Peachpit Press
1-800 283 9444

PORTABLES

HP Eyes Mainstream With Bigger OmniBook

BY GEOF WHEELWRIGHT

Hewlett-Packard is moving into the mainstream notebook PC market, and is doing so in living color. After two years of selling its pioneering OmniBook sub-notebook computer, HP says the company needs to also move into the volume notebook market to offer the kind of power it says users are demanding.

The product it will use to make this move will be known as the OmniBook 4000, a 6.5 pound notebook system it is marketing as "the full function desktop to go PC." The first thing you should know about this system is that it will only be offered with a color screen. HP says that users now expect color and are disappointed with anything less, even on a notebook system.

The OmniBook 4000 provides a large 10.3-inch color display available using either Dual-scan Supertwisted Nematic (DSTN) passive matrix technology or the more expensive — but visually superior — Thin Film Transfer (TFT) or active matrix style of display. The TFT version of the screen is also slightly larger at 10.4 inches. This large screen is highly readable, comes with a 256-color driver so that you get maximum use of the display, and should thus ensure that most mobile PC users don't find themselves hankering for a large screen to plug their mobile PC into.

The OmniBook 4000 comes in three Intel processor flavours: a 486DX2-50 Mhz configuration, a 486DX4-75 Mhz arrangement and a blisteringly fast 100 Mhz 486 DX4 installation. Base level 50 Mhz models come with 4 MB of RAM, while 8 MB RAM is standard on the other two. All systems can be expanded to 32 MB of RAM and include MS-DOS 6.2, Windows for Workgroups 3.11, LapLink Remote Access and provide PCMCIA expansion that can be used as two PCMCIA Type II slots or one PCMCIA Type III slot.

Storage options on the OmniBook 4000 start with a 260 MB hard disk on the basic 50 Mhz DSTN model and range up to a 520 MB drive. All models come with a built-in 3.5 inch floppy disk drive, which is designed to be removable. When removed, a second battery pack can be fitted into the floppy disk slot to give you longer running time away from a wall plug-in.

The OmniBook 4000 uses the now industry standard NiMH (Nickel Metal Hydride) battery technology employed by most portables, but HP says it has plans to introduce Lithium Ion batteries (as used in Toshiba's Portege range) next year. These batteries will yield a greater number of "watt-hours per kilogram" (the most common measurement of battery performance for notebook systems) and will offer a better lifetime recharge cycle figure (the number of times the battery can be charged properly).

The system also comes with everything you need for multimedia presentations except a CD-ROM. A Sound Blaster compatible sound card is built-in, along with two speakers, a microphone and a CD-ROM audio-in port. This means that if you connect an external CD-ROM to the system, the volume of it can be controlled through the OmniBook 4000's internal sound card.

The speakers sound slightly better than what you would get from the average transistor radio, but you would probably do better to use the sound on this system either with headphones or external speakers (for which there is a plug-in). If, however, you only need to play back voice annotations or other bits of speech, the internal speakers are certainly up to the job.

In terms of overall design, there are a few nice touches on the OmniBook 4000 that are well worth noting. The first is the layout of keyboard and trackball. Like many of today's best notebooks, it can't help but remind you of Apple's PowerBook. The keyboard is moved back from the front of the machine, with trackball and buttons in the centre of a wrist rest area. Speakers sit underneath the wrist rests. The trackball is refreshingly large for a notebook (25 mm, to be exact) and the trackball buttons are large enough that you don't waste time trying to hunt them down all the time.

Another "goodie" that merits attention is the support for PCMCIA Plug and Play Card and Socket Services. This means that when Windows 95 comes out with full Plug and Play support, the OmniBook 4000 will be ready to make use of all the latest in Plug and Play-aware software and hardware. And to make sure that it stays up to date, the OmniBook 4000 holds its BIOS (Basic Input Output System) in user-upgradable flash memory - so that you can load new Plug and Play BIOS software into it as it is enhanced in the months leading up to the launch of Windows 95.

Finally, all the elements needed to turn the OmniBook 4000 into a desktop system are included. There are keyboard, mouse, external display, serial and parallel connectors, and support for both ECP and EPP (Enhanced Capability Port and Enhanced Parallel Port) standards on the parallel port.

In addition, HP has produced an optional "port replicator" for the OmniBook 4000 that provides all the "pass through" connections you would expect, provides a Type IV PCMCIA slot, a SCSI-2 connector, security cable and includes software support for expanded PCMCIA and SCSI-2 drivers to

➤

Act
SEE US SOON FOR ALL YOUR COMPUTER NEEDS
COMPUTECH (CANADA) LTD

PENTIUM 90
$2,489
- Intel Pentium CPU
- PCI Green motherboard w/256K Cache
- 4MB 72 pin simms
- 3-1/2" 1.44 MB Floppy Drive
- 420MB Western Digital Hard Drive
- PCI IDE & I/O Controller Card
- ATI Mach 64 PCI Video Card w/2MB
- 14" ACER Green UVGA Monitor
- Mid Tower w/230w Power Supply
- MS-Compatible Mouse

PENTIUM 60
$2,038
- Intel Pentium CPU
- PCI Green motherboard w/256K Cache
- 4MB 72 pin simms
- 3-1/2" 1.44 MB Floppy Drive
- 420MB Western Digital Hard Drive
- PCI IDE & I/O Controller Card
- ATI Mach 64 PCI Video Card w/2MB
- 14" ACER Green UVGA Monitor
- Mid Tower w/230w Power Supply
- MS-Compatible Mouse

i486DX2-66
$1,388
- Intel 486 CPU
- Green VLB Motherboard W/128K Cache
- 4MB 72 Pin Simms
- 3 1/2" 1.44 MB Floppy Drive
- 420MB Western Digital Hard Drive
- Super IDE & I/O Controller Card
- S3 VLB Video Card W/1MB
- 14" ACER Green UVGA Monitor
- Mini Tower W/200w Power Supply
- MS-Compatible Mouse

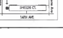
i486SX-33
$1,238
- Intel 486 CPU
- Green VLB Motherboard W/128K Cache
- 4MB 72-Pin Simms
- 3-1/2" 1.44 MB Floppy Drive
- 420MB Western Digital Hard Drive
- Super IDE & I/O Controller Card
- S3 VLB Video Card W/1MB
- 14" ACER Green UVGA Monitor
- Mini Tower W/200w Power Supply
- MS-Compatible Mouse

MULTIMEDIA $289.00
- Double Speed CD-Rom
- 16-Bit Sound Blaster (Creative Labs) Card
- Pair of Stereo Speakers

HARD DRIVE $279.00
420MB Western Digital IDE Hard Drive

72-hour burn-in test guaranteed
3 year labour & parts warranty in
Canada and U.S.A.

ACT COMPUTECH (CANADA) LTD,
250 Shields Court, Unit 19, Markham, Ontario L3R 9W7



Tel: 905-415-0990
Fax: 905-415-0113
Mon-Sat.
10:00am-6:00pm

support CD-ROM drives scanners and extra hard disks A separate power supply is not needed for the port replicator as power is provided by the OmniBook.

While the OmniBook 4000 will not enter the market as the cheapest "full-function desk top to go PC" on the market, it is certainly one of the most fully-specified The entry level model with DSTN color display, 50 Mhz 486 DX2 processor, 4 MB of RAM and 260 MB hard disk is expected to sell for around the US$3500 mark (Canadian prices were not fixed at press time) somewhat of a premium price for this kind of system although one that could prove worth it in the long run given the number of "future-proofing" features built-in.

New Features For Original OmniBook

After two years of trying to sell monochrome subnotebook computers in the price-sensitive end of the mobile PC market HP is pulling up stakes on its subnotebook OmniBook range and moving it permanently to the color end of the market.

From now on HP will only sell one 3 8 pound subnotebook-style OmniBook and that will be the new OmniBook 600 a US$2 800 color system that offers lots of power at a premium price It will come with a "passive matrix" 8.5-inch color display 4 MB of RAM (on the base model) and a 170 MB hard disk. There will be two processor options an Intel 486 DX2 50 Mhz system (which will come with 4 MB of RAM) and a 75 Mhz 486 DX4 machine with 8 MB of RAM

HP says the company was not selling its previous range of OmniBooks in the numbers needed to sustain success - and blames some of its own design decisions for that It now says that bundling Microsoft's Excel and Word applications into the machine was an error and suggests that users now really demand full-color screens as a starting point The only question is whether or not they will pay the extra money needed to go for a system with an active matrix TFT screen rather than the now standard passive matrix DSTN display

In most other respects, the OmniBook 600 will be broadly similar to current models but with 2 PCMCIA Type II (or one Type III slot) a 260 MB hard disk option, BIOS held in user-upgradable flash memory and a new "port replicator" option that provides you with Windows 95-ready Plug & Play compatibility for add on options a SCSI-2 port as well as optional networking connectors and all other standard ports ❑

AC Systems

Pentium 100MHz Power Packs!

intel inside pentium

Pentium Desktop Series: Tornado-P90/100 Line

- Intel Pentium 100MHz with Intel Neptune Chipset
- 4x 32-bit PCI Bus & 4x 16-bit ISA Bus Slots
- 256KB Cache (exp to 512KB)
- 8MB 72-pin 70ns RAM (exp to 768MB on board!)
- 3 5" 1 44MB FDD & 840MB 12ms IDE HDD
- PCI ATI Graphics Pro Turbo Mach64 w/2MB
- 15" Monitor 1280x1024 NI 72Hz, 0.28
- 101 Honeywell Enh Keyboard & Mouse
- Triple Cooling Technology
- 2 Years Parts & Labor Warranty

$ 3,385.00

*** Limited Quantity! ***

Pentium Dual-Processor Power-Series: Hurricane-P90/100 Line

- Intel Pentium 100MHz (upg. to 2x Pentium 90/100)
- Intel 82430NX PCIset Neptune Chipset
- 4x 32-bit PCI Bus & 3x 32-bit EISA Bus Slots
- 256KB Cache (exp. to 512KB)
- 16MB 72-pin 70ns RAM (exp to 768MB on board!)
- 101 Honeywell Enh Keyboard & Microsoft Mouse
- Two 16550 UART High-Speed Ports
- Adaptec 2940W PCI to FAST Wide SCSI-3 Controller
- 3.5" 1 44MB Panasonic FDD
- 1 08GB Quantum fast FAST Wide SCSI 2 HDD (20MB/s)
- PCI ATI Graphics Pro Turbo Mach64 w/4MB
- MAG MXP-17FG 0 26 17" FST Monitor
- Triple Cooling Technology
- 2 Years Parts & Labor Warranty

FOR MORE INFORMATION AND PURCHASING CALL (416) 449-0311 OR FAX (416) 449-0596

Graffiti Easier to Read

Personal digital assistants (PDAs) those small handheld computers that you are supposed to be able to use by "writing information onto a screen," have not been a big success since their first release two years ago

The most important reason for this has been their inability to accurately recognize a user's handwriting or printing Even simple three-letter words like "cat" are often "recognised" as something like "oq!" due to the poor recognition power of systems such as the Apple Newton MessagePad and the Tandy Z-PDA Zoomer A California company has come up with a solution to this problem.

Palm Computing has developed a simplified version of the existing alphabet — a kind of short hand — that Graffiti does its recognition work with. Palm Computing claims recognition rates of almost 100 per cent and data entry speeds of up to 30 words per minute using this technology

For each letter you enter a set of pre-defined strokes and Graffiti then translates those strokes into the corresponding text character on the computer screen Graffiti also covers many characters that are currently impossible to achieve with current recognition technology

These include accented characters, punctuation and symbols, as well as numbers, symbols and capital letters. The latter are handled in much the same way as you would on a standard keyboard — by "shifting" Graffiti into uppercase through a simple keystroke that precedes the character that will be in upper case Similar strokes are used for caps lock and numbers, so that things like the number five are never confused with the letter "S"

Graffiti also offers users what it calls "ShortCuts" which are user-defined sequences of strokes that can be used to recall frequently-used words phrases or even complete blocks of text.

Trial copies of Graffiti can be obtained through Palm Computing over CompuServe the Internet or by calling the company in the US at 415-949-9560 The product is expected to start shipping to shops later this month at US$79 —GW

Smart Machine

Tel.(416)920-3252

Fax.(416)921-8940

1255 Yonge St. 102 Toronto Ont. M4T 1W6

St Clair
Yonge ■ Woodlawn
Bloor

ALL PRICES ARE CASH DISCOUNTED
VISA & MASTER CARD ARE ACCEPTED
PRICE MAY CHANGE WITHOUT NOTICE
PRICE CAN BE EVEN LOWER (CALL)
MONTHLY PAYMENT PLAN AVALABLE
ON-SITE SERVICE - NO PROBLEM

ALL SYSTEMS INCLUDE
101K ENHANCED KEYBOARD
MID TOWER 230W PS CASE
LOGITECH DEXXA 400DPI MOUSE & PAD
2 YEAR PART & 3 LABOUR WARRANTY

486DX2-66Mhz INTEL CPU
Buil-in Math-Coprocessor
256K L2 Cache + 8K Internal
3 VESA Local Bus Slots
IDE & FDD VL-Bus Ctrl
365Mb 11ms 128KC Hard Drive
1Mb S3-805 VL-Bus 32bit Win. Accel
8Mb 72pin 70ns RAM
1 44 Panasonic FDD

MOST AFFORDABLE

1299
$46 monthly

2,599
$89 monthly

MOST POWERFULL

Pentium P5-90Mhz CPU
Heatsink and Fan for CPU
256K L2 Cache + 16K Internal
2Mb PCI Diamon Stealth 64 Accelerator
PCI IDE controller 2S/1P/1G
8Mb 72pin 70ns RAM
540Mb 12ms 128K Cache HD
1 44 Panasonic Floppy Drive
4PCI Local Bus + 5 ISA Slots

It's right to be SMART

486DX2-66Mhz INTEL CPU
Buil-in Math-Coprocessor
256K L2 Cache + 8K Internal
3 PCI Local Bus Slots
IDE & FDD PCI Ctrl 2X16550 UART*
SCSI PCI 64bit DMA Ctrl.
1Mb S3-864 PCI 64bit Win. Accel.
540Mb Quantum 12ms 128KC HD
8Mb 72pin 70ns RAM
1 44 Panasonic FDD
UPGRADE TO DX4-100 +$400

SM BEST BUY

1649
$57 monthly

14" Samsung 28mm N.I 1024X768 Green	$325
14" Samsung 28 N.I 1024x768 76Hz, CPU Digital Ctrl, Green	$379
15" Samsung 28 N.I 1024x768 76Hz CPU, Digital Ctrl,LR, Flat,Green	$539
15" SONY .25mm 1024X768 76Hz, CPU Digital Ctrl LR, PM	$1,249
17" Samsung 17GLS 26mm 1280X1024 76Hz, CPU,Digital Ctrl,LR,PM	$1199

STUFF FOR UPGRADE

CREATIVE LABS DISCOVERY 16	$349
CREATIVE LABS SCHOOLHOUSE 16	$399
SOUND BLASTER 16MCD + 2X CDROM	$269
Diamond Stealth 64 2Mb DRAM w Corel	$299
Diamond Stealth 64 2Mb VRAM	$449
Diamond Viper Pro W9130 4Mb VRAM	$899
Practical Periferals 14 400 Fax/Modem	$159
ZOOM 14 400 Fax/Modem	$158
BOCA 28 8 Int Fax/Modem	$289
BOCA 96/24 Voice Mail Fax/Modem	$99

OS/2 WARP ON CD ROM $130.00

THE WORLD'S MOST POPULAR SERVICE & SUPPORT GROUP

Power-PC MACINTOSH

POWER Macintosh 6100/60MHZ

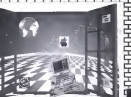
60-MHZ-PowerPC 601 RISC
with/math Coprocessor 32k cache
8MB-Ram expandable 72MB
Apple SuperDrive 250MB HD
Built in LocalTalk & Ethernet
AppleTalk Software, SCSI Ports
Sound 16BIt/ ADB Ports.

POWER Macintosh 7100/66MHZ

66-MHZ-PowerPC 601 RISC
with/math Coprocessor 32k cache
8MB-Ram expandable 136MB
Apple SuperDrive 500MB HD
Built in LocalTalk & Ethernet
AppleTalk Software. SCSI Ports
Sound 16BIt/ ADB Ports.
Energy Star Compliant !

WORLD

Business Systems Inc



Power-PC MACINTOSH

POWER Macintosh 8100/80MHZ

80-MHZ-PowerPC 601 RISC
with/math Coprocessor 256k cache
8MB-Ram expandable 264MB
Apple SuperDrive 1GB HD
Built in LocalTalk & Ethernet
AppleTalk Software SCSI Ports
Sound 16BIt/ ADB Ports.
Energy Star Compliant !

Apple Workgroup Server 9150

80-MHZ PowerPC 601 RISC
with/math Coprocessor 512k cache
16MB-Ram expandable 256MB
Apple SuperDrive 2GB HD
Built in LocalTalk & Ethernet
AppleTalk Software. SCSI Ports
Energy Star Compliant !
System 7 software

THE FUTURE IS NOW !

THE FUTURE IS NOW !

Monitors

NEC 5FGP / 6FGP	Call
MAG MXE-15 15"	669
MAG MXP 17 17"	1329
SONY 15 SF 15" New	615
SONY GDM 17 Se	1489
SONY GDM 20 Se	2655
Viewsonic 15	685
Viewsonic 17	1089
Viewsonic 21	2619
Mitsubishi 17 FS	1369
Mitsubishi 21 FS	2679
Philips 17290T 17" .26es	1125
Philips 20820C 20"	2369
Magnavox 17" w/Spkrs	789
Apple Color Plus 14	Call
Apple AudioVision 14"	Call
Apple Multiple Scan 17/20	Call

Printers

Canon BJC-4000 New	469
Canon BJC-600	769
Epson LQ570 Plus	389
Epson StylusColor 720	795
Lexmark 4039-12R+	1895
Lexmark 4079C PS	2665
Lexmark 600 Win	1529
HP-Laser 4 Plus/4V	Call
HP-Laser 4si	4239
HP-Laser 4si/mx	5839
Kodak ColorEase PS	9699
Apple Style Writer II	Call
Apple Style Color Pro	Call
Apple LaserWriter 320	Call
Apple LaserWriter 630 Pro	Call
Brother 400 Deskjet	319
Brother HLF 300dpi	619
Brother HL10h 600dpi	1379
Fujitsu DL 1150	329
Fujitsu DL 3800	729
Fujitsu DL-5400	1649
Fujitsu PrintPartner	435

$7725

WORLD DX/90MHz Pentium-586 PCI

Server FullTower 330W w/Wheels
Intel Premier II 90MHz/256k
PCI slots, Enhance I/O PCI
16mb-Ram SIMMS 72pin 70ns
1.44mb 3.5" Floppy Panasonic
Seagate 1.0GB SCSI 10ms
ATI Turbo64 4MB PCI
WORLD 2000 101 Keyboard
MS-J Mouse II with/Mouse Pad
MAG MXP 17 NI MPR II
Adaptec 2940 PCI kit
Plextor 4Plex Quad int
Creative AWE32 16 Wave
MS Dos 6.22 / Windows 3.11

$5985

WORLD DX/66MHz Pentium-586 Vesa

WORLD Full-Tower Case 300W
Intel 586/66MHz/512k
16mb-Ram SIMMS 72pin 70ns
1.44mb 3.5" Floppy Panasonic
Promise Enh 2300 I/O w/16550
Western Dig. 1.08GB IDE
ATI Pro Turbo64 4MB VLB
WORLD 2000 101 Keyboard
MS-J Mouse I with/Mouse Pad
Viewsonic V17 .27mm NI
GRAVIS Ultrasound Max 32
Double Speed int. CD-Rom
6-Outlet Surge Protection
MS Dos 6.22 Windows 3.11

$2995

WORLD DX2/66MHz Advance-486 Vesa

WORLD MediTower Case 200W
Intel 486dx2/66MHz/256k
3VLB Slots (DX-4 Upgrd.)
8mb-Ram SIMMS 72pin 70ns
1.44mb 3.5" Floppy Panasonic
Seagate 540MB IDE 10ms
ATI Graphics Pro Mach32 2MB VLB
WORLD 2000 101 Keyboard
MS-J Mouse II with/Mouse Pad
SONY 15SF 15" NI .25mm
GRAVIS Ultrasound Max 32
Double Speed int. CD-Rom
6-Outlet Surge Protection
MS Dos 6.22 Windows 3.11

$2345

WORLD DX/33MHz Office-486 Vesa

WORLD MediTower Case 200W
Intel 486dx/33MHz/256k
3VLB Slots (DX-4 Upgrd.)
8mb-Ram SIMMS 72pin 70ns
1.44mb 3.5" Floppy Panasonic
Seagate 420MB IDE 10ms
ATI Wonder Mach32 1MB VLB
WORLD 2000 101 Keyboard
MS-J Mouse II with/Mouse Pad
KDS 1460I 14" NI .28mm
GRAVIS Ultrasound Max 32
Double Speed int. CD-Rom
6-Outlet Surge Protection
MS-Dos 6.22 Windows 3.11

Hard Drives

Quantum 356MB IDE	269
Quantum 540MB IDE	301
Quantum 540MB SCSI	389
Quantum 1.08GB SCSI	799
Seagate 428MB IDE	319
Seagate 545MB IDE	369
Seagate 720MB IDE	475
Seagate 1.0GB SCSI	799
Seagate 2.1GB SCSI 1M	1069
Seagate 4.2GB SCSI 1M	3029
Western Dig. 426MB IDE	309
Western Dig. 540MB IDE	369
Western Dig. 730MB IDE	449
Western Dig. 1.08GB IDE	869
Samsung 214MB IDE	229
Samsung 428MB IDE	285

Controllers

Adaptec 1542C kit	345
Adaptec 2842 VLB kit	345
Adaptec 2940 PCI kit	419
Adaptec 2742T EISA	499
Promise 4030 ISA cach	199
Promise 4030 VLB cach	189
Promise 2300 VL Enh. I/O	109
EnhanceMulti I/O VL/PC	89

-WORLD AT A HIGHER LEVEL-

Network

Intel EtherExpress 16 CX	109
Intel EtherExpress 16 RJ45	109
Microdyne (Novell) 16 CX	119
Microdyne (Novell) 16 RJ45	119
Microdyne (Novell) 32 VL	Call
NOVELL 3.12v 5-25 User	Call
NOVELL 3.12v 100 User	Call
NOVELL 4.01v 5-25 User	Call
NOVELL 4.01v 100 User	Call
MS WorkGroups 1 User	72
MS WorkGroups 10-User	699
D Link DE500VL 32bit CX	329
SMC Elite 16Plus CX/RJ45	175

Video Cards

ATI Wonder VLB 1MB	159
ATI Wonder VLB 2MB	239
ATI UltraPro 2MB VLB/PCI	349
ATI Turbo64 2MB VLB/PCI	439
ATI Turbo64 4MB VLB/PCI	679
Diamond Viper 2mb VLB	399
Diamond Viper 64 4mb VLB	729
Diamond Stealth 64 2mb	Call
Diamond Stealth 64 4mb	Call
Hercules Dynamite 2MB VL	209
#9 GXE Turbo64 2MB VLB	385
#9 GXE Turbo64 4MB PCI	Call
#9 GXE Turbo64 4MB VLB	Call

Scanners

Microtek ScanMaker IISP	1179
Microtek ScanMaker IIHR	1589
Microtek ScanMaker III	3719
HP ScanJet II P 256k	589
HP-ScanJet IIcx Colour	1349
Logitech ScanMan Colour	399
Apple QuickTake Photo	Call
Apple OneScanner Colour	Call

Sound Cards

Creative 16ASP SCSI-2	289
Creative 16ASP M/CD	249
Creative 32AWE 16Wave	389
Logitech SoundMan Wave	255
Gravis Ultrasound Max 32	259
Gravis Ultrasound Midi upgr	89
Adaptec AudioMachine	459
Adaptec Audio Edge SCSI	329
TBS Audio Advantage	489
TBS MultiSound Monterey	489

Fax Modems

Boca 14.4 F/M internal	145
Boca 14.4 F/M external	169
Boca 28.8 F/M int VFast	279
Boca 28.8 F/M ext VFast	299
Boca PCMCIA 14.4 F/M	329
Boca Fax/Data/Voice 14.4	249
US-Robotic Sport 14.4 int	189
US-Robotic Sport 28.8 int	309
US-Robotic Sport 28.8 ext	339
Xircom PCMCIA 14.4 F/M	Call
Megahertz PCMCIA 14.4	309
Practical Per. 14.4 int.	145
Practical Per. 28.8 ext V.34	349

UPS PowerSurge

APC BkUP 250VA PC	159
APC BkUp 450VA Server	289
APC BkUP 600VA Server	Call
APC BkUp 280VA PC	179
APC SmartUP 400VA	489
APC SmartUp 600VA	Call
APC SmartUp 2000VA	Call
APC Surge Protect 3T	69
APC Surge Protect 7T	79
APC Surge Protect PC	49
APC Command Centre PC	129
Universal Surge Bar	19
Universal Control Centre	89

CD Multimedia

NEC 3XI CDR 500 int	639
NEC 4X Quad int/ext.	Call
Toshiba XM3401 SCSI int.	389
Toshiba XM3401 SCSI ext	535
Apple CD 300e/300i Plus	Call
Plextor 4Plex Quad int	599
Plextor 4Plex Quad ext	749
Plextor 4/7Ray CD-Rack	Call
Creative Omni3x SCSI	589
ATI Video-it Capture	436
Creative Blaster SE	369
Intel Smart Video Rec/Pro	599
Cardinal SnapPlus Brd	399

Brother HL-10h
10ppm 600dpi 2mb
HP-Laser 4 PCMCIA
Postscript 1 w/Toner
$ 1379.00

Microtek II HR
600dpi Optical 1 Pass
Flat Bed 24bit colour
w/PhotoShop (Full)
$ 1589.00

Epson Stylus Colour
720dpi 5ppm
Colour InkJet Printer
Sample Pack incl
$ 795.00

Sony CDP-15 sf
MultiScan 15"
Flat/Screen 25mm
1280 x 1024 Digital
$ 615.00

Promise VL/IDE 2300
Enhanced Multi I/O
4-HD 4 FD (ATA)
w/UART 16550
$ 109.00

Conner Tape Drive
820mb Tape BackUp
Floppy Connection Int.
Qic Format w/Tape
$ 309.00

CD SoftWare Alert

ALDUS Pagemaker 5.0v Upgrade	199	MS-Office 4.3v Prof. Upgrd.	Call	Lotus 123 5.0v Upgrade	139
COREL DRAW 5.0v Upgrade	339	MS-Word 6.0v Upgrade	149	Lotus Smart Suite	599
Quark Express for/Windows	649	MS-Access 2.0v Upgrade	149	Lotus Freelance	405

Apple PowerBook 520c
4mb-160mb HD Bndl
Dual Scan Colour
System 7 software
$ 3799.00

CD SoftWare Alert

Norton PC-Anywhere for/Win	149	Word Perfect 6.0v Upgrade	125	Borland C++ Upgrade	159
Norton Back-Up 6.0v Upgrade	Call	Delrina Winfax 4.0v Upgrade	99	Borland Turbo C++ Upgrade	Call
Norton Utilities 8.0v Upgrade	89	Adobe PhotoShop 5.0v (Full)	759	Borland dBase 5.0v Win Upgr.	289

YOUR GUIDE TO THE " Home, Office Business & Corporate Revolution "

Corporate Gold &
Government Agencies
Fax In Your Requests
24hrs. Hot Fax

Gold Account

VISA

MasterCard

WORLD Direct
To order CALL

Sales Line:(905) 470-5760
Service :(905) 470-5766
Fax . (905) 470-5772
(Corner of McIntosh & Woodbine One Lights North of Highway #7)
we carry over 25,000 products come in and see our demo room

WORLD
1995
Coming Soon!

M-F 9 am-6 pm
Sat 10 am-5 pm
Sunday Closed !

Prices and Specifications Subject to Change Without Notice   All advertised products already 3% CASH Discounted! For up-to date prices and availability please call WORLD Business Systems Inc. Is Proud to Be a Member with (MARKHAM BOARD OF TRADE) We Value Our Reputation & Service ! So just visit us at " WORLD "

Special Offer 3.99 BOX OF 10 DISKS

Grand Opening!

Mouse $ 8 99

COMPUTER WORLD
Sales & Service

486DX2-66 vlb $ 1299

Green System, Vesa LB Motherboard, Built-in Math Co-Processor, 4 MB High Speed RAM 340 MB IDE HD 3 1/2 FDD 14" N/I Monitor 1 MB Vesa Video Card, Super Mini Tower 2S/1P/1G ports, 3 button Serial Mouse 101 Enhanced Keyboard

-1 Year Parts & 2 Years labour Warranty
Best Price for Pentium

Free delivery and setup of your system

Tel: (416) 787-6063
Fax: (416) 787-3261

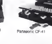
1194 Eglinton Ave. W. Toronto, ON M6C 2E3
walking distance from SUBWAY

NEW
JETBOOK Symphony
Portable MultiMedia
Internal* SCSI card
Internal* 14.4 Data & Fax
Internal Speakers
VESA Local Bus IDE & 1MB Video
Modular Design for Easy Up-Grades
SX
DX2
DX4
*Optional items
SMARTBOOK
2 YR LAPTRAX
JETBOOK Star
VESA 1MB Video
BYTE
Windows
PC WORLD
International Distributor OEM's, SI's, VAR's, & Reseller's
3yr
North American Sales Contact
1(800) JETTA - 1 - 2
LIFETIME
800
JETTA - 1 - 2
All logos and trademarks are registered trademarks of their respective companies.

Multimedia Portables Soar to New Heights

BY DAVID TANAKA

IBM Thinkpad 755 CD



Panasonic CF-41

Sell the transport truck and fire the roadies. Portable multimedia has arrived. Within weeks of each other IBM Canada and Matsushita Electric of Canada (Panasonic) have launched notebook PCs that set new standards for portable multimedia. Both the IBM ThinkPad 755 CD and Panasonic CF-41 include a built in full-size CD ROM drive, stereo sound and 10.4 inch TFT color screens that will display 65,000 colors. We saw how incredible thousands of colors can be on an LCD screen during a Panasonic's briefing on the CF-41.

Both multimedia machines include built in stereo sound card and built in speakers, as well as the usual assortment of functions laptop users now demand. Nickel Metal Hydride batteries, PCMCIA slots (both have one Type III that can be used for two Type II devices) and power management.

Panasonic's entry, called the CF-41, will be available initially with 486 DX2-50 and DX4-100 processors. Eventually the company plans to offer several models. A DX2-50 powered model with passive matrix screen will occupy the bottom end of the product line while a 75 MHz Pentium powered model with active matrix screen, 8 MB of RAM and a 680 MB hard drive will be the top dog.

The CF 41's CD-ROM drive bay is cleverly hidden under the keyboard. Lifting the keyboard reveals a thin but full-size dual speed CD ROM drive to the left and a storage pod that will hold one CD on the right. The drive will also play the smaller 3.5 inch CDs.

On the ThinkPad 755CD the CD drive bay is located on the left front of the computer, and a holder mechanism slides out to load the disc. The machine also has a special port that allows a user to conect a joystick or MIDI device.

IBM has announced two models (differing only in the size of the hard drive, 540 MB vs 810 MB) of the MPC II compliant 755CD, both powered by Intel 486DX4-100 chips.

Some other interesting technology has been built into the ThinkPad. For example, it includes an Mwave digital signal processingg (DSP) chip. The DSP chip allows a number of telecommunications functions to be built into the computer — data/fax modem, a telephone with speakerphone and answering machine capabilities and message storage.

Prices for various models of the Pansonic range from $6,700 to $12,300. Prices for the ThinkPad 755 CD are $9,999 for the 540 MB model and $10,699 for the model with an 810 MB hard drive.

We're hoping to have full reviews of both of these machines in a future edition, after we've had a chance to get our hands on them.

	IBM ThinkPad 755CD	Panasonic CF-41
Weight	7.3 lb	8.5 lb
Screen	IBM Black Matrix on Array	Matsushita VH
Sound	16-bit stereo	16-bit stereo
Speakers	2, built in	2, built in
CD-ROM	double spin, removable	double spin

Contacts
Panasonic: 1-800-504-4456
IBM Canada: 1-800-465 7999

MEMORY HD
Diskettes (Canada) Inc.
(Canada, United Kingdom, Singapore, Malaysia, Hong Kong, Japan)

- DUPLICATOR GRADE 3.5" MFD 2 HD
- OEM MANUFACTURER

Manufacturer, Sole Importer & Distributor for "MEMORY" Brands 3.5" MFD 2HD

Tel: (519) 888-9488 Fax: (519) 888-7271
1-800-224-1217

Head Office: 130 Frobisher Dr., Suite 8 Waterloo, Ont.
OEM Office: 2 Robert Speck Pkwy, Suite 750, Mississauga, Ont.

PORTABLES

Low-voltage Pentium Coming to Notebook PCs

BY GEOF WHEELWRIGHT

Intel is putting its Pentium processor effort into "overdrive" this month with the announcement of low-power 75 MHz Pentium processors for use in notebook computers, and the revelation that its much-touted Pentium OverDrive processor enhancement is likely to start shipping in January.

Intel expects the availability of the 75 MHz Pentium processor for notebooks to have a major impact on how such products are used and sold According to Doug Cooper, chip architecture manager for Intel of Canada the immediate availability of this chip should further blur the line of distinction between portable and desktop systems

"The performance gap between desktop and mobile systems disappears with the 75 MHz Pentium processor in notebooks " says Cooper "Users will discover that they can confidently move from their desktop to their notebook without compromising performance or productivity A Pentium processor based notebook also offers the best investment for the user as it will keep pace with new releases of computer intensive software better than other notebooks."

Intel claims the new 3 3 volt 75 MHz Pentium processor will operate twice as fast as the 75 MHz Intel DX4 (currently a staple component of high-end notebook systems) as it operates with a 64-bit 50 MHz external bus, rather than the 32-bit, 25 MHz bus used by the 75 MHz DX4

You ll start to see this chip being used in real systems right away in power notebooks such as Toshiba s 'no compromise' T4900CT which will provide desktop-level power in a color machine that weighs less than 7 pounds

And Cooper expects that we ll hear about many more low-power Pentium based notebooks in the coming weeks as the flurry of new product announcements surrounding the recently held Fall Comdex show begins to make its way into the trade press "We expect a pretty steep adoption curve," he says. "This is a sector of the market that has been waiting for higher-power "

He says that customers who use high-end notebook systems are based mainly in large corporations who need as much power as possible to give their employees maximum productivity, whether they are in or out of the office And with this level of power corporations can start thinking about giving their mobile users single high-end notebooks as their only PCs rather than the traditional combination of a desktop complemented by a less-powerful notebook system for mobile use.

Meanwhile on the subject of the Pentium OverDrive products, Cooper promises that these will be "a good buy" and pledges that the heating and compatibility problems which plagued earlier Pentium upgrade efforts have been solved The major vehicle allowing Intel to keep this pledge is a hardware verification process for new upgradable Pentium systems

Intel is inviting hardware manufacturers to submit their systems for verification with the Pentium OverDrive chip Only those that pass this verification test will be able to carry an "Intel-verified" sticker on their OverDrive hardware

Toshiba T4900CT uses 75 MHz Pentium

Cooper explains that these Intel verification tests will involve carry out thermal tests to look at airflow around the chip and the resultant internal temperature of the chip whether or not the upgrade socket is located someplace that is hard to get at (such as sitting underneath the power supply) and regardless of what usability factors have been taken into account in the system design (whether there are jumpers to change and DIP switches to set when an upgrade is done)

He said that this verification process has to take into account the fact that it may be two years or more between the time the system is purchased and the time that someone buys an OverDrive chip to upgrade its performance Intel is thus working with manufacturers to ensure that, as OverDrive technology evolves and improves, it does so in such a way that it doesn't close off upgrades to older systems. And he vows that if a manufacturer gets an Intel verified sticker on their system, Intel will ensure that its OverDrive upgrades will work with those verified systems. ❑

IPC
intel inside
• 3 Year Parts and Labour Warranty
Limited Time Offer on Pentium Systems
IPC 590 MTP, Intel 90MHz $3449.00
IPC 566 MTP, Intel 66MHz $2899.00
IPC 566 MTPs Intel 66MHz $3239.00
IPC 486 DX-2/66, Intel (Multimedia) $2049.00
IPC 486 DX-2/66 Intel 66MHz $1699.00
ALL SYSTEMS INCLUDE: DOS 6.2 & WINDOWS 3.1 (Monitors Sold Separately.)
Monitors Prices
Daytek Monitor 14, .28 I $290.00
Daytek Monitor 14, .28 NI $311.00
Philips Magnavox 14, .28 NI $335.00
Daytek 15, .28, NI, Low Rad, FS $409.00
Philips Brilliance .28 NI, FS $535.00
Philips 17 .26 NI, FS $1080.00
Multimedia Kit Special
2X Speed CD-ROM, Sound Blaster 16 MCD, Shielded Speakers 10 CD Titles, Installed. $390 00

HTS Blow Out Special
486-Sx-33 MHZ $1199.00 or $10.60 per week
486-Dx-33 MHz $1299.00 or $10.90 per week
486 Dx 2/66 MHz $1499.00 or $12.70 per week
486 Dx-2/80 MHz $1569.00 or $13.70 per week
System Configuration:
4MB RAM 1.44 MB Floppy Drive 420 MB Hard Drive, VLBus 1Mb & Controller SVGA Monitor .28DPI N.I. 14" 101 Enhanced Key Board 3 Button Mouse w/ Pad Mini Tower Case 230 Watt Power Supply
2 Years Warranty Parts & Labour
Multimedia System Special:
486 Dx 2/66 MHz $1949.00 or $20.00 per week
System Configuration.
4MB RAM 1.44 MB Floppy Drive 540 MB Hard Drive VLBus Controller & Video 1MB U/g 2 MB 101 Key Board 3 Button Mouse SVGA Monitor .28 N-I Sound Blaster 16, 2x CD ROM Shielded Speakers 500 Dollars Worth of Software.
Pentium System Blow Out Sale:
Pentium 90 MHz $3190.00 or $27.00 per week
Pentium 66 MHz $2869.00 or $24.70 per week
System Configuration:
8 MB RAM, 1.44 FD 540 MB Hard Drive PCI Controller & Video SVGA Monitor 15"
Printers
Samsung 24 Pin $245.00
Raven 2406 24 Pin $265.00
HP Ink Jet 540 $425.00
HP Ink Jet 560 C $699.00
Epson Stylus 800 Plus $369.00
Samsung Laser 5ppm $635.00
Brother Laser 5ppm $699.00
Modems
14.4 Fax & Data Modem Int $95.00
14.4 Fax & Data Modem Ext. $149.00
28.8 Fax & Data Modem Int. $199.00
28.8 Fax & Data Modem Ext $225.00
Epson Stylus 800 Plus $369.00
Samsung Laser 5ppm $635.00
Brother Laser 5ppm $699.00
On Sale
On Sale
HI-TECH SERVICES
835 ALBION RD., ETOBICOKE ONT. M9V 1A9
MONDAY - FRIDAY • 9AM - 7PM
SATURDAY • 10AM - 5PM
TEL: (416) 746-8815
FAX: (416) 746-0415

PCMCIA Moving to Desktop

BY GEOF WHEELWRIGHT

Once defined as a simple way to add memory and modest amounts of storage to handheld and laptop computers the PCMCIA (Personal Computer Memory Card International Standard Association) standard for plug-in add-on cards now looks set to challenge the standard ISA bus for supremacy on the desktop

At its fifth annual meeting in Cambridge MA in late September the PCMCIA committee responsible for the evolution of PCMCIA standards put forward a number of proposals that could see the power, flexibility and capacity of PCMCIA cards expand to challenge the best available ISA (Industry Standard Architecture) and even PCI (Peripheral Component Interconnect) cards on the market today

Made public under the code name Berlin, these new PCMCIA proposals would see the PCMCIA standard provide for the development of multifunction cards that could run on as little as 3 3 volts, with build-in support for DMA (Direct Memory Access) All these features would make PCMCIA cards more flexible and more powerful, and would allow them to stack up better in comparison to desktop ISA and PCI cards

Some US market researchers already believe that the movement of PCMCIA in this direction will inevitably make it the leading method for desktop PC expansion BIS Strategic Decisions, for example, predicts that within four years some 70 per cent of desktop PCs will include PCMCIA slots

The committee also reportedly discussed a proposed "Card Bus" for desktop systems which would transform the current 16-bit ISA based model for PCMCIA card interfacing to a 32 bit bus that is compatible with the Intel backed PCI local bus system The key attraction here is that the development of such a Card Bus would literally allow any PCI-style peripheral produced as a PCMCIA card — including high-end graphics cards — to be connected to a notebook or desktop system via a standard PCMCIA card.

Some attendees of the conference were even talking to the press about how this might presage the creation of "slotless PCs" without any screws hinges or pop-off lids And during the week of the conference, trade magazine Computer Retail Week reported a new prediction from US research firm Dream IT that says PCMCIA cards are likely to grow in popularity for use in desktop systems from sales of about 30 000 in 1994 to more than one billion by 1998.

If PCMCIA can truly become a full-function expansion standard that both desktop and computer users can embrace, then there would no longer be any need for users to have to get

➤

Who is PCMCIA?

PCMCIA was formed in 1989 as a non-profit trade association aimed at establishing a worldwide memory card standard for the PC industry The standard defines the size pin assignments electrical requirements, protocols and file formats of credit card sized PCMCIA add-on cards More than 130 manufacturers semiconductor companies software suppliers and systems integrators have joined the PCMCIA since its establishment

The list of longtime PCMCIA members is impressive Leading names on the group's executive membership list have included Fujitsu Intel IBM Microsoft, Mitsubishi Phoenix Technologies Poleroid Puget Sharp Texas Instruments Toshiba and Zenith Other well-known associate and affiliate members have included AST Apple, Atari, Compaq Connor Peripherals Dell Epson GRiD Systems Hayes Microcomputer Products HP Lotus Development, Maxoll Mitac, Symantec Samsung Travelling Software and Novell/WordPerfect.

Although having names such as Microsoft, IBM and Lotus on the member's list is important it is the breadth of support the group has enjoyed across the industry which has helped it achieve some degree of success where previous similar attempts have failed

One reason for this is that the PCMCIA group has representation from almost every nook and cranny of the PC industry Microprocessor and memory chip manufacturers for example are ably represented by companies like AMD Chips & Technologies Intel Micron Technology (one of the few US RAM chip manufacturers) Motorola, National Semiconductor and Samsung Semiconductor

Crucially the membership list also includes companies that produce IBM-compatible BIOS products — the ROM chips which ensure IBM software compatibility Included on the list of PCMCIA members are both Award and Phoenix Technologies which produce a huge chunk of the BIOS chips for the mainstream desktop PC clone market.

LINO Output P.C. & MAC

APPROVED SERVICE BUREAU

North America's only true P.C. service bureau. Direct from original software NOT converted to the MAC.

Tri-Tech (Canada) Inc.
local: (416) 293-7944
Toll Free 1-800-314-4440

Output direct from P.C.
Get the real power out of CorelDRAW!
Don't convert files for output.
use any of your 300 True Type fonts from CorelDRAW! 3', 4' or 5'

Peace on earth, good will toward all ...

Best wishes of the season from the staff at

THE COMPUTER PAPER

Yeuko Computer parts & service (1988) * **Union Computer & Electronic Inc.**

3241 Kennedy Rd.,unit 5,Scarborough M1V 2J8 (one block south of Steels)
Tel 416-321-3018 416-321-3019 Fax 416-321-8558 (on the East side)

2076 Yonge St Downtown Toronto M4S 2A3 (3 stop lights south)
Tel 416-488-9293 Fax 416-488-5085 (of Eglinton on the west side)

All prices are cash discounted and subjected to change without notice HOURS YEUKO--M-F 10AM 7PM SAT 10AM-6PM UNION--M-F 11AM-7PM SAT 11AM-6PM

Hard Drives	
120MB IDE	$179
210MB IDE	$199
340MB IDE	$229
420MB IDE	$279
540MB IDE	$339
1 0 GB IDE/SCSI-2	$689/799
1 4 GB SCSI 2	$1149

Main Boards	
486 DX/DX2/SX/P24T VESA 128K	$99
Gigabyte 486DX/2/4/SX VESA ZIF 128K SIS	$139
ASUS 486DX/2/4/SX VESA ZIF 128K SIS	$149
ASUS 486DX/2/4/SX VESA-PCI ZIF 128K SIS	$199
USA Galaxy 486DX/2/4/SX VESA 128K SIS	$149
Opti Pentium 60/66 PCI & VESA 256K Opti	$299
ASUS Pentium 60/66 PCI 256K Intel	$379
Opti Pentium 90/100 PCI VESA 256K Intel	$495
MicroStar Pentium 90/100 256K Intel	$499
ASUS Pentium 90/100 PCI 256K Intel	$699
Gigabyte P 90/100 PCI 256K Intel Neptune	$549
USA Super VIP P 90/100 PCI VESA 512K Opti	$579
USA Super VIP P 90/100 w/Adaptec PCI card	$799
ASUS & Gigabyte Pentium 90/100 Dual CPU	$Call

CPUs	
486DX2-66/DX4-100 Intel	$299/699
486DX2-50 Cyrix/Intel	$199/249
486DX-40 Cyrix	$179
486DX 33 Cyrix/Intel	$179/199
486SX 25/33 Intel	$99/129
Pentium 60/66/90	$589/699/839

Floppy Drives	
Panasonic/Sony 1 2m 5 25in	$57
Panasonic/Sony/Fujitsu 1 44m 3 5in.	$45
Epson dual floppy drive (1 2 & 1 44)	$139

Keyboards	
BTC Daewoo 101 key AT	$18/24
Honeywell WN 101 professional AT	$39
Keytronic KT2000 professional 101 key AT	$49

Ram Memory	
1M SIMM 30 pin 70 ns	$52
4M SIMM 30 pin 70 ns	$196
4M SIMM 72 pin 70 ns	$199
8M SIMM 72 pin 70 ns	$399
16M SIMM 72 pin 70 ns	$669

Video Cards	
ISA Cirrus Logic 256K	$45
ISA Cirrus Logic 512K	$55
ISA Cirrus Logic 1M	$95
ISA S3 Accelerator 1M	$95
VLB Cirrus Logic 5428 accelerator 1M	$109
VLB S3 super fast Win.accelerator 1M	$109
VLB/PCI/ISA ATI Wonder Mach 32 1M	$145
VLB/PCI/ISA ATI Graphic Expression 64 2M	$285
VLB/PCI/ISA Diamond Stealth 64 2M	$290

Cases	
Mini tower 5 bays 220W CSA	$59
Desktop 5 bays 200W CSA	$59
Mid-tower 7 bays 220W CSA	$75
Full tower 9 bays 250W CSA	$135

Monitors	
Daytek 14"0.28 SVGA NI 60 Hz	$289
Daytek 14"0.28 SVGA NI low-radiation72Hz	$329
Daytek 15"0.28 UVGA NI 70Hz low radiation	$445
Daewoo 17"0.26 NI UVGA 70Hz low radiation	$849
Acer 14"0.28 SVGA NI (brighter sharper)	$309
Acer 15"0.28 UVGA NI (brighter,sharper)	$485
Magnavox 20"0.31 UVGA 1280x1024 NI flat	$1349

Printers	
LEXMARK ExecJet IIc Inkjet Brilliant Color	$495
HP Deskjet 540 600x300 dpi 3ppm color option	$419
Epson Stylus 800+	$329
Epson Stylus 720 color	$799
Canon BJ200e 360x360 dpi	$339
Canon BJC4000 360x360 dpi color	$709
Okidata OL410e 600dpi 4ppm 2m LED	$889
Refills for BubbleJet/DeskJet/Laser	from $10/8/59

I/O Cards & Controllers	
ISA AT I/O 2 ser 1 par 1 game w/cable	$16
ISA Hi-speed AT I/O 2S/1P/1G 1x16550	$35
ISA Hi-speed serial 1x16550 UART	$28
ISA IDE 2HD & 2FD	$16
ISA IDE HD/FD I/O 2ser,par,game	$18
ISA Enhanced IDE,FD 2X16550 I/O,1P 1G	$49
ISA 4 FD & 2 HD 2Ser 1Par 1Game	$59
VLB IDE HD/FD,2S,1P 1 Game	$22
VLB/ISA IDE Caching controller	$189
VLB Enhanced 4IDE 2FD 2X16550 I/O 1P 1G	$75
VLB Enhanced 4IDE,2FD 2Ser 1Par 1 Game	$39
PCI Enhanced IDE controller	$36
PCI Enhanced 4IDE controller	$45
PCI Enhanced IDE,I/O 2S 1P 1Game	$85
PCI SCSI controller / caching controller	$80/350
Adaptec ISA 1522 SCSI HD,FD 16bit	$119
Adaptec ISA 1542CF SCSI HD,FD	$279
Adaptec VLB 2842 Kit	$319
Adaptec PCI 2940 Kit	$385

Multimedias	
SoundBlaster MCD	$69
SoundBlaster 16 multi-CD interface	$119
Sound Blaster Discovery 16 KIT	$349
Panasonic 562 dbl speed CD-ROM	$175
Mitsumi double speed CD-ROM	$149

Modems & Faxmodems	
Pocket faxmodem 9624 for Note Book w/case	$69
Zoltrix Voice Faxmodem	$139
Zoltrix 14400 S/R faxmodem int. s/w v 32bis	$99
Zoltrix 28800 S/R faxmodem int. s/w	$199
US Robotic 14400 int. faxmodem v.32bis	$159
US Robotic 28800 int faxmodem v.42bis v.FC	$269

Repairs !!!!!!!!!

Monitors (parts & labour)	from $75
Computer service	$35/hr
Laser printer clean & service from	$75

SYSTEM SALE

486DX-33 VESA	$1299
486DX2-66VESA	$1399
486DX2-80VESA	$1499
486DX4100VESA	$1799
Pentium-60VESA	$1898
Pentium-90 PCI	$2428

Standard config
Gigabyte Mainboard 256K cache
Conner 420M Hard Disk 4M Ram
Panasonic 1 44M Floppy Drive
32bit VESA S3 1M Video Card
32bit VESA IDEHD/FD controller
Daytek 14" N I Monitor 0 28 DP
Minitower 220w.101 KB 2S/1P/1G
1 yr parts & 3 yr labour warranty
Upgrades - 4M RAM --------$199
540M Harddisk----$60
15 'Daytek mon--$155
Free Seminar with system purchase !

Network Cards & Accessories	
16 bit Ethernet NE2000 comp BNC/RJ45	$67
BNC and connectors/Terminators	$4
Network cable w/connectors 10/50ft	$10/25
6ft Laplink cable	$9
Printer cable 6/10/20/30 ft	$4/8/13/18
Auto printer switch 2 in 1	$35
Microsoft 3 Mouse with disk bus/serial	$45/35

DOWNTOWN
NEW LOCATION
OPENING SOON

ABC
COMPUTER

MERRY CHRISTMAS
HAPPY NEW YEAR
HOLIDAY: DEC. 25 TO
JAN. 2 '95

MARKHAM
7170 WARDEN AVE
UNIT 17 L3R 5M8
TEL (905) 946-1613
FAX (905) 946-1057

SCARBOROUGH
4800 SHEPPARD AVE. E.
UNIT 120 M1S 4N5
TEL (416) 321-0413
FAX (416) 321-0429

MISSISSAUGA
6200 DIXIE ROAD UNIT 103
ORDAN BUSINESS PARK L5T 2E1
TEL. (905) 564-2281
FAX (905) 564 2280

INTEL PCI LOCAL BUS SERIES

Pentium 90 Mhz $2799 • 540M HD
Pentium 66 Mhz $2549 • 425M HD

SYSTEM INCLUDES:
- Intel CPU & PCI Local Bus Motherboard
- Math Co-processor & CPU fan
- 256k ext. cache
- 8 M FAST RAM 72 Pin 70ns
- ATI PCI Mach 32 1M SVGA card
- 15" SVGA .28 N.I, F/S, L/R *Energy Saver* Monitor (Digital Control)
- 1 44M 3 5" Floppy Drive (Japanese)
- 2 High speed Serial port (16550 chip)
- 1 parallel port
- Acer 101 Key Enh. Keyboard (ISO-9002 certified)
- Mid Tower Case 250w power supply w/LED Display
- FREE Microsoft or Logitech Mouseman & Mouse Pad

Dealers Welcome

ALL SYSTEMS
INCLUDE
2 YEAR PARTS &
LABOUR WARRANTY

$2249 Pentium PCI 60 Mhz

• 8M RAM • 256K External Cache •
• Two 16550 Serial Port •

$1469 Intel 486 DXII-66 MHz

AMD CPU $1439

• Vesa Local Bus •

SYSTEM INCLUOES
Built in Math Co-processor •
128K Cache •
4M RAM 70ns •
420 HD Conner or Maxtor •
ATI Mach 32 1M Vesa Local Bus SVGA Card •
14" .28 dp NI SVGA Monitor (1024x768) •
1 44M 3.5" Floppy Drive (Japanese) •
VL Bus IDE controller 2S, 1P 1G •
Mid Tower Case 250W p s w/LED Display •
Acer 101 Enhanced Keyboard (ISO 9002 Certified) •
FREE **Microsoft** or **Logitech** 3 button Mouse & Pad •

MULTIMEDIA COMPUTER SYSTEM

	INTEL 486 DX-33	INTEL 486 DXII-66
Entertainment Series	$ 1,419	$ 1,499
Professionol Series	$ 1,559	$ 1,639

Entertainment Series
System Includes:
Sony CD ROM Drive
Zoltrix 16 bits
Sound Card & Speaker

Professianal Series
System Includes:
Panasonic CD ROM Drive
Sound Blaster 16 Bits
Sound Card & Speaker

SYSTEM INCLUDES:
VL Bus 32 Bit Mother Board
4M fast RAM 70NS
345 M H D
1 44 F D (3 5")
14" 28 SVGA Monitor (1024x768)
VL Bus 1M SVGA Card
VL Bus IDE Controller,
2S/1P/1G
Mini Tower Case w/220W P/S
101 Enhanced Keyboard
Free M S Comp Mouse & Pad

• ALL PRICES ARE ALREADY 4% DISCOUNTED FOR CASH, MONEY ORDER & CERTIFIED CHEQUE ONLY • PRICES SUBJECT TO CHANGE WITHOUT NOTICE •

HARD DRIVES

MAXTOR, QUANTUM, SEAGATE WESTERN DIGITAL, CONNOR

250MB	$229
340MB	$239
425MB	$275
540MB	$345
730MB	$525

MOTHERBOARD

486SX-25 VESA LB	$199
486DX 33/40 VESA LB	$359
486DX2-66 VESA LB	$413

CONTROLLERS

ADAPTEC

1522 SCSI HD/FD CARD ONLY	$117
1522KIT SCSI CARD S/W CBL	$206
1542KIT SCSI CARD S/W CBL	$364

VIDEO CAROS

S3 1M Windows Accel VLB	$98
Cirrus Logic 1M VLB	$105

ATI

Graphics Wonder 1M ISA	$146
Graphics Wonder 1M Vesa/PCI	$149
Mach 32 Graphic Ultrapro 2M V-RAM	$329
Mach 64 Graphic UltraTurbo 2M V-RAM	$498

KEYHOAROS

ACER	$35
ENHANCED 101	$20
KEYTRONIC 101	$45

MEMORY

SIMM 256K 70NS	CALL
SIMM 1MB 70NS	CALL
SIMM 4MB 70NS	CALL
SIPP 1MB 70NS	CALL
DRAM 41256-80	CALL
DRAM 44256-70	CALL
DRAM 411000-70	CALL

MONITORS

ACER

15" FS 1024x768 .28 N.I Green	$455
17" FS 1280x1014 .28 N I Green	$898
15" FS 1024x768 0.28 N-I	$415

PHILIPS

15" FS 1024X768 0.28 N-I	$585
17" FS 1280X1024 0.25 N-I	$1 240

MITSUBISHI

DIAMOND SCAN 17	$1 335
DIAMOND SCAN 20	$2 273
DIAMOND PRO 21FS	$2,510

NEC

3V	$698
4FGE	$979
5FGE	$1,689
6FG	$3 450

CASES

DESKTOP / 220W P S	$55
MINI-TOWER / 220W P.S	$56
MED TOWER DISPLAY / 220W	$65
FULL TOWER DISPLAY / 220W	$80
220W POWER SUPPLY	$35
250W FULL SIZE P S	$45

PRINTERS

RAVEN

RP3100 9 PIN	$180
RP2405 24 PIN	$225
RP2406 24 PIN OPT COLOR	$279
RP2420 24 PIN 256CPS	$370
PR9606 9 PIN WIDE	$496
PR2465 24 PIN WIDE	$475
LP470PS 4PPM LED SLIM	$1 125
LP510 5PPM LASER 512K	$721
LP530 5PPM LASER 1M	$929
LP570PS POSTSCRIPT 2M	$1 475
LP1030 10PPM LASER 1M	$1,375
COLOR KIT FOR 2406 9106	$55

CANON

BJ200e W FEEDER	$355
BJ230 W FEEDER WIDE	$529
BJC600 W FEEDER COLOR	$709
LBP430 Laser	$785

HEWLETT PACKARD

HP DESKJET 540 ***NEW***	CALL
HP DESKJET 560C	CALL
HP4L 300DPI 1M LASER	CALL
HP4 600DPI 2M LASER	CALL

EPSON

LQ570 24 PIN 252 CPS	$332
LQ870 24 PIN 330 CPS	$618
LQ1070 24PIN WIDE 225CPS	$510

MULTI MEOI

CREATIVE LAB

SOUND BLASTER 16	$129
SOUND BLASTER 16 MCD	$139
EDUTAINMENT CD 16 KIT D/S	$640
DIGITAL EDGE CD M/M KIT D/S	$820

CD-ROM

PHILIPS CM405 CD ROM	
EXT 265MS MPC PHOTO SCSI	$690
SONY CDU561 CD ROM	
INT 280MS MPC PHOTO SCSI	$450
TOSHIBA XM3401B CD ROM	
INT 200MS MPC PHOTO SCSI	$490
CHINON CDS535 CD ROM	
INT 280MS SCSI W CONTROLLER	$520

FAX/MODEM

9600/2400 INT S/R	$48
14 4 INT	$99

BOCA RESEARCH

INT 14 4	$149
EXT 14 4	$190

US ROBOTICS

14 4 BPS INT SPORTSTER	$155
14 4 BPS EXT SPORTSTER	$185
COURIER 16 8 BPS INT	$665
COURIER 16 8 BPS EXT	$745
COURIER HST/DS INT	$969
COURIER HST/DS EXT	$1 039

inside their PCs to install cards, flip DIP switches, connect cables and do all those other frustrating things which perennial PC upgraders have faced since the early days of the Apple II.

Work Still to Do

All of these sound like great ideas, but a number of things will need to happen before PCMCIA ever achieves this kind of success. The first thing that has to happen is that PCMCIA has to become a more stable standard. It is fine to upwardly improve the specifications of something like PCMCIA, but there must be sensible mechanisms for doing so.

Over the past two years we have seen PCMCIA slots incorporated in everything from handheld PDA systems to high end color notebook computers. And we have also witnessed frustration from people who for example take PCMCIA hard disks, plug them into small subnotebooks and wonder why their system fails over because it can't supply enough voltage to the PCMCIA slot. Similarly some PCMCIA modems have suffered from being loaded with too high a voltage when plugged into certain office phone systems.

There has also been end user confusion over the different levels of PCMCIA — Types I, II, III and most recently the proposed PCMCIA Type IV slot.

Add to this the development of PCMCIA "enhancements" such as Intel's ExCa and you need look no further to wonder why PCMCIA has been less successful than expected.

Having said all that, it does now appear that the PCMCIA committee realizes where the standard has to go to be more successful. It also has enough industry support that it can probably make the necessary design improvements needed to create a strong, backward compatible PCI level 32-bit, bus mastering Card Bus that will last into at least the near future.

Having overcome this not inconsiderable technical hurdle, the question then becomes one of how you achieve the volume necessary to make PCMCIA cheap enough for PC manufacturers and users. This is something of a "chicken and egg" proposition in that PCMCIA card interfaces for notebooks and desktops will not get cheaper unless they sell in large volumes, but manufacturers and users will probably stick with ISA and PCI if they have to pay a substantial premium for PCMCIA slots.

The likely route to overcoming this problem is the notebook PC. Most notebook systems these days already use PCMCIA and the development of something like the Berlin standard will only serve to strengthen the hand of those who want to sell notebook systems that can also double as desktop machines.

As desktop PC manufacturers begin to feel the pinch from such "notebooks on a desk," they will likely be spurred to create more desktop systems with PCMCIA compatibility— so that peripherals and data can more easily be shared between desktop and notebook systems.

To make retail sales of PCMCIA cards easier, the PCMCIA group has also announced that it is renaming PCMCIA as PC Card technology, and will publicly refer to it by that name in the future. The name is also expected to better reflect the range and breadth of PCMCIA products currently on offer. ❑

What Type of Card For You?

These days it seems hard to keep track of PCMCIA card standards. You hear about Type I, II and III card slots being offered in most notebook and some palmtop systems, as well as a rumored Type IV slot on the horizon (and already offered in proprietary form on some Toshiba systems). Physically, the only difference between all these different types of PCMCIA slots is their thickness (length and width remain constant at 86.6 mm x 54 mm). Even the number of connection pins (68) is the same on all types of PCMCIA cards.

It is the extra electronics packed into these different thicknesses that makes each type unique. Type I cards, which are 3.3 mm thick, are typically used for static RAM memory, ROM (Read Only Memory, such as applications on a card) and linear "flash" memory. Such cards are rarely used these days.

Instead, it is the Type II card — at 5 mm thick — which is commonly used as the workhorse standard for devices such as modems, solid state memory, local area network adapters, sound cards, SCSI adapters and so on. Type II cards are also the driving force behind the expansion capabilities of personal digital assistant (PDA) systems such as Apple's Newton MessagePad 110 and the Tandy/Casio/AST Zoomer family of products.

Newer Type III cards, which require a 10.5 mm thick card slot, are now commonly used for hosting high-performance devices for notebook PCs. These include large hard disks. In many new notebook systems, a single Type III slot is setup so that it can also be used as two Type II slots if you don't use Type III cards.

Finally, there is the as-yet-unofficial Type IV slot, which Toshiba has brashly put on some of its new notebooks even though the specification has not yet been approved by the PCMCIA group and it is not widely supported yet. It is 16 mm thick and allows you to have even higher-capacity hard disks than the Type III slot. ❑

ACER AcerNote
Acer America Corporation
Advanced Notebooks

9½" Active Matrix Colour

Model	CPU	RAM	HDD	Price
750C	i486DX-25	4MB	210MB	$3295
760CX	i486DX2-50	4MB	340MB	$4695
780CX	i486DX4-75	8MB	340MB	$5399

9½" Mono & 9½" DualScan Colour

Model	CPU	RAM	HDD	Price
730Mono	i486SX-25	4MB	120MB	Fax modem included $1789
735C	i486SX-33	4MB	210MB	$2895
760C	i486DX2-50	4MB	340MB	$3295

Standard Features on AcerNote -

- Acer 1 year, 24 hours Replacement Warranty in Canada & U.S.A
- Free Acer 1 year International Travelers Warranty 1st class support in more than 20 countries worldwide
- Acer toll-free technical support available 24-hours-a-day, 7-days-a-week
- Intel 3.3V Microprocessor, Advanced Power & System Management Modes
- Local Bus Video (Support ext. 1024x768x16 colours / 800x600x256 colours)
- Supports simultaneous display on notebook screen and external monitor
- 2 PCMCIA type II or 1 type III slot(s) for Fax/Hard disk etc.(Color Models only)
- Easily upgradable 2.5" internal hard drive
- Ergonomic palmrest with built in EasyTrac trackball
- Advanced NiMH battery (Color Models only) with 2-hour rapid charge system
- Net Weight 6.4lbs with battery Battery Life 3.5 hours
- Acer (110-240V Auto-sensing) AC adapter with smart charge control circuit

MultiMedia Package ..
Panasonic 2X 562B CD ROM
Sound Blaster 16 Sound Card Kit
ONLY $ 320 Installation Instruction & all accessories incl

BCC i486DX2-66 $1449

- INTEL i486DX2-66MHz Microprocessor
- LEO Taiwan made VESA Local Bus Mainboard
- AMI BIOS, 128K 2nd Level Cache Expandable to 256K
- ZIF Socket for Pentium P24T / i486DX4 (P24S) CPU Upgrades
- 4MB Fast 32 bit Memory, expandable to 96MB
- Both 30 pins & 72 pins SIMM Sockets built-in for Easy Upgrade
- CPU Heat Sink and Cooling Fan
- VESA 32 bit Cirrus Logic 5428 Video Card with 1MB, Exp to 2MB
- VESA 32 bit IDE Hard Disk Interface Card
- Conner 420 MB Fast IDE Hard Disk
- Daytek 14" SVGA 0.28 Colour Monitor

BCC i486DX-33 $ Ask !!!
BCC i486SX-33 $ Ask !!!

BCC Pentium 90 $2969

- INTEL PENTIUM 90 MHz Microprocessor
- Built in Math Co-Processor
- INTEL PCI II ENERGY STAR Mainboard (Intel manufactured)
- AMI BIOS Level 5 CPU ZIF Socket
- 256K Level 2 Cache
- Three PCI Local Bus & Five 16 bit ISA Bus Slots
- 8MB Fast 64 bit Memory, expandable to 128MB
- CPU Heat Sink and Cooling Fan
- ATI Mach 64 PCI Video Processor Card with 2MB
- Japanese 2.88MB Floppy Drive
- Maxtor 540MB IDE Hard Disk
- Daywoo 15" NI SVGA .28 Dot Pitch Colour Monitor
- ENERGY STAR and Swedish Low Radiation MPR2
- Two 16550 Serial One Bi-directional Parallel Port

BCC Pentium 60 $2399

GAMES CD for BCC Computers :-

- Colonization CD	$ 77
- Cyber Race CD	$ 30
- Dinosaur Safari CD	$ 30
- F-117A Night Hawk CD	$ 27
- Gabriel Knight CD	$ 31
- Mad Dog McCree II CD	$ 38
- Gunship 2000 CD	$ 29
- King Quest VI CD	$ 27
- Mega Race CD	$ 28
- Kodak Photo CD	$ 20
- Macmillan Dictionary-Child CD	$ 36
- Bookshelf 94 CD	$ 50
- Microsoft Golf CD	$ 45
- MYST CD	$ 60
- Outpost CD	$ 73

Standard Features on BCC Computers -

- INTEL Brand Micro Processor
- Benchmark / Dallas Real Time Clock & Battery
- Japanese Brand 1.44MB Floppy Drive
- Middle Tower Case (BCC i486 & BCC Pentium System)
- 220W CSA Power Supply
- One Parallel, Two Serial, One Game Port
- Mitsumi Enhanced 101 keys Keyboard
- MICROSOFT Serial Mouse V2.0A
- MICROSOFT MS DOS V6.22 with all Disks, Manual & License
- 2 Years PARTS and LABOUR Depot Warranty

BCC COMPUTERS

368 College Street
Toronto, Ontario M5T 2V8
Tel (416) 972-1741
Fax. (416) 972-1922

7170 Warden Ave. Unit 14
Markham, Ontario L3R 5M8
Tel (905) 946-0615
Fax (905) 946-0616

All prices are COD Cash Discounted, Credit Card & Corporate P.O. Net Terms will be of Regular Price = [Cash Discounted Price + 4%]
All prices cash discounted, subject to change without notice
All brand names and product names are property of their respective companies.

Utilities To Ease Windows

BY GEOF WHEELWRIGHT

The market for Windows utility software is changing. Once filled with desk accessories, file manager replacements and Windows versions of old DOS utilities, today's market for Windows utility packages is considerably more innovative.

There are now Windows applications "uninstallers", hardware and software configuration tools, file enhancement managers, and a variety of other goodies, all of which really add value to the way you use Windows, rather than just replacing functions which were traditionally offered in DOS utility packages.

Uninstallers

About a year ago, a few bright developers realized that Microsoft Windows was extremely messy about the way that it required new applications to be installed. Not only would the application require its own directories, and add DLL (Dynamic Link Library) files to the Windows directory and/or system directory, but it would also typically insert extra lines in your .INI files (and quite often your AUTOEXEC.BAT and CONFIG.SYS files as well).

If you then decided for some reason to go and remove the application which had written itself to all these different locations all over your hard disk, you would be in trouble. Windows would start looking for files that had been deleted, error messages would pop up all over the place and — in some cases — your Windows system would even crash. For anyone who has suffered these indignities, the idea behind uninstalling products should be both appealing and obvious.

Landmark Uninstall-It!

Typical of the products in this genre is Uninstall-It! from Florida based Landmark Research International. It is designed to help you not only carry out "clean" removal of unwanted Windows applications from your system, but also:

- move Windows applications to a different directory or disk drive without losing their Windows properties and associations;
- safely compress and backup Windows applications that aren't in regular use;
- and find "lost" or "stray" applications on your disk that are no longer in use.

Not unlike many other applications from smaller software houses, Uninstall-It! is written in Microsoft Visual Basic and therefore no other Visual Basic applications can be running when you start installing or using Uninstall-It! Once installed, it offers you an opening screen providing four choices: Scan Applications, Find Strays, Find Duplicates, Restore Backups.

The first step you're likely to take in using Uninstall-It! is to select the Scan Applications option. This will review the Windows groups and icons installed on your system and also figure out which program groups, files, items, icons and entries are associated with each installed application.

When Uninstall-It! is finished this process, you can then uninstall, move or backup any of the installed applications and their associated files. Given that Uninstall-It! is designed to remove not only the application but also all the data files you created with that application, we found that it was essential to use the backup option before doing anything.

This backup process offers you a number of options, starting with a chance to list all the elements you are planning to backup. This will include all the component parts of the application listed individually in the Application Viewer. It will list everything from the main application .EXE file to help system files, Readme files, directories, associated data files, and private .INI files, as well as all drivers, DLL (Dynamic Link Library) and VBX files created by the application.

If you are unsure about the contents of any of these files, they can be viewed individually using the Uninstall-It! data viewer, which offers you views of data held in most popular Windows data formats. These include applications such as Microsoft Word, Works, Borland's dBase, Paradox, Lotus 1-2-3 and Ami Pro, as well as support for viewing common data file formats such as PCX, TIF, BMP, HEX and ASCII.

Having selected the files you wish to work with, Uninstall-It! will then tell you how much disk space will be freed up by uninstalling the application in question, how much will be needed to back it up, and the amount of space

➤

TOUCH THE UNIVERSE
A New Way To Play Lotto 6/49

The **Lotto 6/49 Horoscope** was designed by an expert in the ancient Chinese Yi Philosophy and the western Zodiac. He has spent years searching for spatial patterns in all the past 6/49 draws, and using his expertise, has condensed his findings into a calendar - **LucCalendar.**

The **LucCalendar** is easy to use. Each draw has highlighted numbers. If your birth sign is favoured strongly, the calendar will tell you so. Each draw shows different number patterns, some which favour your birth sign in particular. You choose from these lucky numbers. **It's that simple.**

Remember: When the calendar shows the highlighted numbers of your birth sign falling in a straight line or close to it, **don't miss this draw!** This is the time when you are most in tune with the universe!

NO . I do not wish to buy your product, but I wish to have a **FREE LucCalendar**
Call (604) 873-9661 to request.

A Calendar A Nice Christmas Gift And An Opportunity To Become A Millionaire

THE DISCOVERY $19.99

08/30/88 -DRAW- VIRGO

SUN	MON	TUE	WED	THU	FRI	SAT
45*	46*	47	48	45	01	02
03	04*	05	06	07	08	09
10*	11*	12	13	14	15	16
17	18	19	20	21	22	23
24	25*	26	27	28	29	30*
31	32*	33	34	35	36	37
38	39	40	41	42	43	44

Adapted from LucCalendar Database, Copyright ©

YES . I wish to buy copy(ies) of Lotto 6/49 Horoscope 1995 @ $16.49 (NOW) per copy, plus GST & PST @ $2.31 per copy. Total $
Please send Lotto 6/49 Horoscope '95 to:
Name:
Address:
Country: Post Code:
I enclose a bank draft/ cheque for $ made payable to.

MT. PACIFIC TECHNOL CO.
P.O. Box 74089, Millcrest R.P.O
Vancouver, B.C. V5V 5C8

What's new and hot

A Hard's Day Night (Beatles)	$24.99
Beethoven's 5th	$28.50
CD Deluxe 4	$29.80
CICA Win 94	$19.99
Compton's Int. Ency 95'	$48.80
Cute 'n Cuddlies	$20.80
Groliers Ency 94	$39.80
Groliers Prehistoria	$25.00
Hobbs OS/2 Aug 94	$22.99
Mayo Clinic	$22.50
Mathematics Library	$22.50
Multimedia Jazz History	$29.99
Middle School Suite	$34.99
Multimedia Fun House	$34.99
Parenting	$24.99
The Complete Algebra	$34.99
Toolkit for Linux (2 CD's)	$39.99
Windows Resume	$34.99
Word Games	$34.99

Just for Kids

A Christmas Carol	$14.50
Arthur's Teacher Trouble	$22.50
Carmen San Diego	$24.99
Dinosaurs Adv.	$38.80
Dr. T's Sing-Along	$18.80
Teddy Bear's Fun Pak	$16.50
Forever Growing Garden	$29.80
Gus Goes to Cybertown	$19.50
Just Grandma & Me	$22.50
Wiggins in Storyland	$28.55

Kids Can Read:
Tale of Benjamin Bunny
[illegible]
$49.50

National Geographic. Ages 4-9
Butterfly, Spiders, Farm Animals, Whales, Dinosaurs, What Air Can Do, Birds and How They Grow, A Tree Through the Seasons
$19.80

Games

7th Guest	$26.99
Blue Force	$29.99
C.H.A.O.S	$24.99
Critical Path	$26.00
Dark Seed	$28.95
Day of the Tentacle	$29.00
Dracula Unleashed	$39.99
Doom II	$58.00
Doom & Accessories	$22.50
Doom Companion	$22.50
Doom Mania	$22.50
Dune	$28.50
F15 Strike Eagle	$24.99
F117A NightHawk	$29.89
Indiana Jones	$29.00
Iron Helix	$27.80
Gabriel Knight	$28.00
Journeyman's Project	$29.99
King Quest VI	$22.50
Lawnmower Man	$28.80
Mad Dog McCree	$24.99
Mad Dog McCree II	$29.99
Man Enough (2 CD's)	$38.80
Mega Race	$23.40
Microcosm	$28.55
Outpost	$38.50
Quantum Gate	$29.95
Rebel Assault	$35.95
Ring World	$29.99
Simcity 2000	$33.00
Star Trek 25th Anniv	$34.05
T.F.X.	$36.50
Under the Killing Moon	$76.00
Wolf 3D Mania	$18.80
Who Killed Taylor French	$29.80
Who Killed Brett Penance	$29.80
World Circuit	$28.99

Microsoft Bookshelf 94'	$52.99
Microsoft Cinemania	$47.50
Microsoft Dangerous Creatures	$48.00
Microsoft Dinosaur	$38.00
Microsoft Encarta 95	$69.00
Microsoft Golf	$33.80
Microsoft Money	$22.50
Microsoft Musical Instruments	$45.00
Microsoft Works 3.0 & Money 3.0	$59.00

The MEDIA CD SHOP
Multimedia CD ROM Software

Panasonic 562 or Sony 33A 2X Drive
Interface Card, Audio & Data Cable
$178.80

MS Encarta 95'
MS Golf
MS Money 3.0
MS Musical Instruments
MS Works 3.0
MS Entertainment Pack
Add $164.95
when you purchase a Sony/SB16 Kit
for other bundles CALL US!

Sound Blaster MCD16 $119.95* *OEM

New Multimedia Speaker Systems Call for details

5 ft. 10 Pak Vol 2
Sherlock Holmes Consulting Detective*Space Quest IV*Battle Chess Enhanced, PC Karaoke Family Fun Pack, Bug N' Roll, Microsoft Multimedia Symphony*Movie Select for MPC, Home Media Advisor, Arts & Letters Win Birds 2000 Fonts by Fontcraft
Add $42.50
when you purchase a Sony/SB16 Kit.

Sales & Showroom
Steeles E. Ave
MON - SAT 10:00 - 6:00
30 Crown Steel Dr. Unit 12
Markham Ontario L3R 9X8
Tel:(905) 940-1502

Dealers welcome!

Season's Specials

486 DX 33 Mhz (VESA) [illegible]
486 DX 2/66 MHz (VESA) [illegible]
486 DX 40 MHz (VESA) [illegible]

Systems include: 4 MB RAM, 270 MB Hard drive, 1.44 FDD, [illegible] 2X multi-session, SVGA .28 DPI NI Monitor, 101 enhanced keyboard, mini tower or desktop case w/digital display, [illegible] VESA IDE controller, 2 serial, 1 parallel, 1 game port, 1 MB video card 32 bit VESA

Monitor Specials SVGA Monitor .28 NI $275

Super VGA Monitors Refurbished $190.00

1.44 FDD $43

Pentium 586 60 MHz $2,699
Pentium 586 66 MHz [illegible]

Systems include: 8 MB RAM, 540 MB Hard drive, 2 serial, 1 parallel, 1 game port, 101 enhanced keyboard, [illegible] 15" SVGA .28 NI monitor, 1.44 FDD, PCI motherboard, PCI controller, [illegible] graphic PCI video card, 3 PCI local bus & 4 I.S.A. slots, tower case, [illegible]

CD-ROM
PANASONIC SPECIAL $180
PHILIPS $150

All prices subject to change without notice

PRINTERS:
EPSON AP2250 $185
EPSON STYLUS 800 INKJET $365
EPSON SYTLUS 1000 INKJET $809
IXP 2023 $215

FAX MODEMS
14.4 FAX MODEM ZOLTRIX $89
14.4 FAX MODEM GVC $129

HARD DRIVES
345 MB $236
420 MB $279
540 MB $339

FINANCING AVAILABLE ON APPROVED CREDIT

HI-TECH MICRO COMPUTERS PHONE 905-712-2277 FAX 905-712-2207

left if you back it up and uninstall it on the same drive.

The latter option is not as crazy as it sounds because Uninstall It! backs up files by compressing them into a ZIP file which is compatible for use with PKZIP 1.0 and greater. This makes it sensible to uninstall those applications you only use once every few months by doing a backup and uninstall on the same hard disk, thereby allowing you the option of restoring the application from the backup file without having to completely reinstall your software from its original floppy disks.

What makes this option really useful is that restoration of backed up applications automatically restores files and entries to their original locations on your hard disk, including entries to key system files such as AUTOEXEC.BAT, CONFIG.SYS, WIN.INI, SYSTEM.INI and REG.DAT, along with all original program groups and associated icons.

None of this is to say, however, that Uninstall-It! is a trouble-free piece of software. In fact anyone who has logged onto CompuServe recently and typed GO LANDMARK will find a raft of complaints about some small bugs in this product. One such noteworthy problem is that Uninstall It! will not work with WIN.INI files that are larger than 21K in size. Landmark Research International, publisher of Uninstall-It!, has released a fix for this bug, and you should be aware of it if you decide to use this product.

WinDelete

A somewhat more slick uninstaller for Windows applications comes from California-based IMSI in the form of WinDelete. It also takes a completely different approach to the question. Rather than being designed primarily to help users grapple with uninstalling Windows applications that already reside on their hard disk (although it will undertake this task), WinDelete is optimally used as a resident safeguard system that manages the installation of all new Windows applications.

It is designed to keep a log of every single file copied to your hard disk during a Windows application installation, as well as to keep track of all changes made to INI, .BAT, DAT, SYS and other system files. By creating its own database of such modifications and changes, WinDelete is in a better position to accurately uninstall applications when they are not needed.

WinDelete is not so much a single "uninstaller" as a fail-safe system that quietly keeps track of what your system is doing whenever it installs a new application, so that it can make sure you can safely "undo" all those things whenever you feel the need to remove the application. As such, it is a good "safeguard" to have on your Windows system for installing applications and then safely and completely uninstalling them when they are no longer needed.

Diagnostic and Systems Analysis

Getting under the hood of your Windows system to try and fix problems in WIN.INI files, sort out hardware conflicts when two devices try to use the same memory or IRQ address, or even just to monitor system performance is what this breed of Windows utilities is all about.

WinProbe 3.0

Typical of the breed is Landmark Research International's WINProbe 3.0 which falls broadly into the category of diagnostic and systems analysis. Unlike some of its competitors, WINProbe performs all its diagnostic work within Windows and doesn't require you to go off and start up a DOS session to find out things like which version of DOS you are running.

WINProbe is designed to hook directly into the internal elements of Windows building blocks, such as its task list, memory management components and operating modes. It will also run happily on all versions of Windows 3.x (including Windows 3.0) and must be one of the few remaining diagnostic packages that claims the capability to run in Windows 3.0 Real Mode.

WINProbe bills itself as a "troubleshooter toolbox" for Windows and could be the kind of package that you don't know you need until it's too late. When we looked at all the hardware tests it includes, there were many times we could think back on when such a thing could have come in very handy.

It will carry out, for example, configuration tests on CD-ROM players, sound cards, CPUs and system boards, math co-processors, memory (whether that memory is configured as conventional, extended, expanded or XMS), video adapters, and screens, as well as serial ports and modem control lines. The package also includes utilities to carry out drive utilization tests, report on the accuracy of keyboard and scan codes, carry out mouse initialization and check the interrupts used for it, do a floppy drive speed and surface analysis, and put your printer port I/O and cabling through its paces to locate faults between printer and PC.

Another really useful feature that would come in very handy in offices where processor and hard disk loads change all the time is WINProbe's "real time status panel," which is a "strip off" control panel that can be removed from the main WINProbe application window and left floating on the screen while you use other applications. It will offer you real time

Continued on page 64

▼SALE!

Fr. 4MB to 16MB.....(72 Pin) $439
Fr. 8MB to 16MB.....(72 Pin) $299
WD 'Caviar'.....420MB HD $269
WD 'Caviar'.....540MB HD $359
Maxtor.....540MB HD $299

Memory Upgr.
Fr. 4MB to 16MB (72-pin) $439
Fr. 8MB to 16MB (72-pin) $299

486 DX2-66 MHz $1299
Vesa local Bus Motherboard, 128K Cache, 4 MB Ram, 1.44MB FDD, 420MB IDE HDD, 1MB 32 bit VL Bus SVGA Windows Accelerator, SVGA 1024x768 (0.28dp) Colour Monitor, 2 Serial, 1 Parallel/1 Game Port, 101 Key Enhanced Keyboard, 3 Button Mouse, Mini Tower Case, 200W Power Supply 2 Year Labour & 1 Year Parts

MPM Industries Corp.
1875 Leslie Street, Unit 7, North York, ON
Tel: (416) 391-4600 Fax: (416) 391-4373

KV COMPUTERS •THE CUTTING EDGE•

Unsurpassed quality & performance! No specials. No gimmicks. Just the finest quality & lowest prices. All the time.

CALL FOR AGGRESSIVE PARTS PRICING

Options: • On-site labour warranty $50 per year
• delivery & set-up $20 per system
• leasing CALL!
– Our systems outperform all others.
– Our motherboards run faster than all others by up to 20%, including Asus

Why spend your hard earned dollars on a mediocre system?
Why compromise?
Drop by for the truth on 486 systems!
You'll be glad you did!

CONFIGURATION #1
- Gigabyte VLB 256k cache DX4 ZIF 72-pin SIMM high performance motherboard
- Intel DX2-66 cpu
- 4 meg RAM 70 ns
- 546 meg hard drive, 10 ms 256K cache
- 1.44 floppy drive
- VLB super I/O Enhanced Controller
- VLB 1 meg S3 upgradeable video card
- Medium tower 230 watt LED
- 14" SVGA .28 NI Low Rad green monitor
- Honeywell keyboard
- Microsoft mouse & pad

2 year parts & labour warranty
$1,580
CALL FOR ALL 486 SYSTEM CONFIGURATIONS

CONFIGURATION #2
- VLB 128K Cache motherboard
- AMD DX2-66 cpu
- 4 meg RAM 70 ns
- 300 meg hard drive
- VLB Super I/O Controller
- VLB 1 meg video card
- Medium tower 230 watt LED
- 14" SVGA .28 NI Low Rad green monitor
- 101 enhanced keyboard
- 3 button mouse and pad

1 year parts & labour warranty
$1,200

Prices are cash discounted
Prices may be lower by the time you see this ad
Please call for current pricing

Call for LOW Pentium pricing!
Call for LOW Multimedia & Component pricing!
Call for LOW Upgrade pricing
(we take trade-ins)

KV COMPUTERS
452 BROWNS LINE
ETOBICOKE, ONTARIO, M8W 3T0
TEL: 416-253-9594
FAX: 416-253-9865

VISA

LANCE COMPUTERS
COMMUNICATIONS & PARTS

MOTHERBOARDS

GIGA BYTE 486DX 128K ZiF VL GRN	$ 169
INTEL O E M 486 256K ZiF GRN VL	$ 179
PINE 486 NOVELL CERT 128K ZiF VL	$ 159
ALI 486 256K GRN LBA ZiF VL	$ 169
INTEL PENTIUM 66 PCI ENH IDE	$1349
INTEL PENTIUM 90 PCI ENH IDE	$1549
MYCOMP PENT 90 VL PCI MB ONLY	$ 649
ASUS PENTIUM 90 PCI / ISA w/h CPU	$1588

UPGRADES OUR SPECIALTY - CALL!
INSTALLATION AVAILABLE WHILE U WAIT!

HARDDRIVES

MAXTOR 546M IDE ATA-	$ 389
MAXTOR 405M IDE ATA-	$ 331
CONNER 420M IDE FAST-	$ 319
FUGITSU 530M IDE 256K	$ 392
WD 730M IDE	$ 564
WD 540 IDE	$ 399
WD 1 06G IDE	$ 829
TOSHIBA 670M SCSI-II	$ 789
IBM 1 05G SCSI-II 512K 6ms Cert	$ 899

INSTALLATION AVAILABLE WHILE U WAIT!

LANCE BASE SYSTEM SPECIAL. . . ONLY $ 999

- INTEL 486DX-33 GREEN V-LB UPGRADEABLE MB
- 4M FAST RAM
- 420M IDE HD
- CIRRUS LOGIC 5426 1M-(2M)V-LB VIDEO
- 1 44MB FLOPPY (JAPAN)
- MINI-TOWER CASE 220W LED
- ENHANCED 101 KEYBOARD
- 3 BUTTON MS-COMPATIBLE MOUSE

ONLY WITH THIS AD!

- MONITOR ADDITIONAL CALL FOR YOUR SELECTION -

VIDEO

ACER CIRRUS LOGIC 5428 1M-(2M)	$ 129
ATI ULTRA PRO V-LB 2M	$ 399
ATI PRO TURBO V-LB 2M OEM	$ 423
ATI GRAPHICS XPRESSION 2M OEM	$ 322
MATROX MGA/2	$ 599
S3 V-LB 1M-(2M)	$ 139
HERCULES DYNAMITE PRO 2M	$ 299
ORCHID KELVIN 64 V/PCI 2M	$ 369

INSTALLATION AVAILABLE WHILE U WAIT!

CONTROLLERS

V-LB SUPER I/O	$ 39
ENHANCED IDE SUPER I/O VL/PCI	$ 89
V-LB SUPER I/O 2X 16550'S	$ 59
ADAPTEC SCSI -ALL MODELS!	CALL
ALWAYS IN-2000 SCSI	$ 239
LAVA MULTI PORT HS I/O	CALL
ETHERNET 16-BIT NE-2000 s/w Conf	$ 88

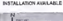
INSTALLATION AVAILABLE WHILE U WAIT!

MODEMS & HEADSETS

GVC 14 4 S/R FAX MODEM INT	$ 139
GVC 28 8 S/R FAX MODEM INT V FC	$ 299
USR 14 4 S/R FAX MODEM INT	$ 179
USR 28 6 S/R FAX MODEM INT V,34	$ 339
ZOLTRIX 14 4 S/R FAX MODEM	$ 99
ZOLTRIX 14 4 S/R VOICE/FAX/MODEM	$ 159
PRO-NETS 19 2 DSP SW-UP VOICE/FAX/MODEM	$ 199

PLANTRONICS COMMERCIAL HEADSETS -WE STOCK!-
PLANTRONICS HEADSETS PLX-400/500 INSTOCK $ 119

HP 4MM DAT SPECIAL
ONLY... $ 949!
LIMMITED QUANTIES



TWO LOCATIONS

[illegible] CASH DISCOUNTED AND SUBJECT TO CHANGE

CALL
905 566-8325
905 507-2579
FX 905 566-0812

TAKE THE RISK OUT OF SOFTWARE BUYING!*

AMI PRO 3.1/ Win

Ami Pro 3 1 is a feature rich word processor It offers everything you need to create fantastic looking documents At just $99 95 this is one steal of a deal!

$ 99.95

Kings Quest VI

The Kings Quest series has always been a popular choice for adventure game fans The CD version has been enhanced making it a must have!

$ 19.95

OS/2 Warp / Win

Are you ready to surf the Internet at WARP speed? IBM's latest version of OS/2 offers this plus so much more! This is the version for Windows users!

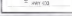
$ 114.95

123 / Win v5 Upg.

Lotus 123 Release 5 sets a new standard in usability performance and power Fly through your work with One Step Charting In Cell Editing Worksheet Tabs and the Live Status Bar

$ 99.95

Prices are cash discounted
Subject to change without notice
Mastercard Cash and Cheques accepted.



Here's just a sample of what we offer

Entertainment/Educational		Business/Productivity	
DOOM Reg	$ 65	Ms Office Std	$ 549
Aces of the Deep	$ 81	Ms Office Std Upg	$ 369
OutPost	$ 45	dBase 5 Win	$ 485
Doom II	$ 79	WP 6 0a Win Upg	$ 119
TNG Tech Manual	$ 69	WinFax Pro V4	$ 79
Thinking Games	$ 26	ACT 2 0 Win	$ 239
Ocean Escape	$ 49	Corel Flow	$ 89

* If for any reason your purchase does not meet with your complete satisfaction, simply return the product within 3 business days, and pay only a 20% restocking fee!**

** Some conditions may apply
Minimum $15 per item

LANCE COMPUTERS

Sandlewood Square
[illegible] Bristol Rd. E.
Mississauga, Ont.

Tel. (905) 507-2579
Fax. (905) 507-1960
Hours: Mon-Fri 10-7 Sat 10-6

Utilities to Ease Windows

Continued from page ***62***

Information on things such as system load cache hit rate (to help you determine whether your RAM cache is set up optimally) what system resources are available and what the current amount of free RAM is at any given moment in time

So WINProbe looks like a useful set of tools for anyone who ever needs to "get under the hood" of their Windows system or even for those who would just like to feel confident enough to do so if the need should arise

Landmark Datasafe

Landmark International has moved into this utility sector for Windows in a big way Another of its new offerings is DataSafe, a product designed to "crashproof" Windows systems The company describes it as "a software utility that extends and improves Windows fault handling capabilities " It is designed to warn you when a General Protection Fault (GPF) error occurs and give you a chance to save data that you would otherwise lose

To do this, DataSafe is loaded every time you start Windows and runs "invisibly" in the background. It is supposed to monitor the behavior of all other Windows applications and help prevent data loss when it detects situations that are going to result in a General Protection Fault

When a GPF does start happening DataSafe will bring up a menu that lets you record details of what you were doing when the error occurred (so you can debug it, if possible) and then allows you to use the Save As option in any open application to save any unsaved data to a new file. It will not work properly however, if you select the Save option instead, as this will potentially try to overwrite a damaged or corrupt file

DataSafe seems a good approach for trying to add greater robustness to Windows, yet Landmark cannot promise that it will work with every GPF — or even significantly reduce the number of GPFs you experience. It just gives you something constructive to do instead of pulling your hair out in frustration

Desktop Aids

This category of utility provides a better way of organizing your Windows desktop arranging your desktop and applications in a way that is much more sensible than that offered in Windows 3 1 and Windows for Workgroups 3 11 This is not hard given the many problems Microsoft has already admitted users have with this interface It is for this reason that Microsoft is completely redesigning the Windows interface for its upcoming Windows 95 due to be released next year

Despite the fact that Windows 95 will change all the rules at a stroke there are many who will stick with Windows 3.x for many months (or even years) to come. For them, these fun utilities can make life a lot more bearable

WinWear's WindowMagic

One amusing alternative to the clumsy Program Manager/File Manager/Print Manager Windows interface is WindowMagic from Bellingham based WinWear This little package provides you with a host of extras without demanding the disk space or resources of something like Norton Desktop for Windows. By giving over a modest 4 MB of disk space to WindowMagic you get facilities for

- printing files by dragging and dropping file icons from File Manager to a new Print-it! toolbar on the desktop,
- setting up a choice of different printers on the Print-it! toolbar so that you can switch from using one printer to another without having to use any dialog boxes
- creating custom toolbars on your desktop that will allow instant single-click launching of any application you put on the toolbar
- exiting Windows with a single click of the mouse on a special X It! icon.

For further customizing your desktop WindowMagic comes with no less than 3 800 icons and an icon manager application that allow you to assign icons to groups and applications as well as create your own customized icon libraries

WindowMagic is not an early answer to Windows 95 — or even a big challenger to Norton Desktop for Windows — but it is one of those modest and fun little applications that can make life with Windows a lot more livable

➤

CHRISTMAS SPECIAL ON COMPUTER SYSTEMS

ENERGY STAR COMPLAINT GREEN VESA

Pentium and DX4 upgradable
ZIF socket
128K cache (upgradable to 512K)
4MB ram 72pin SIMM (expandable to 128MB)
Panasonic 1.44 MB floppy drive
Maxtor 420MB IDE harddisk
VLB 32bit IDE I/O controller with 2 serial, 1 parallel, 1 game ports
Trident 1MB VLB 32bit SVGA card
Orchestra 14" .28 SVGA color monitor (green, 1024 x 768 0.28 dot)
Enhanced 101 keyboard
3 button MS compatible mouse
Mini tower case with 250W power

WARRANTY

486 DX2-66

$1399

Also available as 486SX-33 $1289
486DX-33 $1319

POWERFUL PENTIUM PCI

PCI and ISA slots (Plus one additional VLB)
256K cache 8 MB 72pin Simm (P90 has 512K)
Panasonic 1.44MB floppy drive,
Maxtor or Quantum 540MB IDE harddisk
PCI enhanced IDE
2 serial, 1 parallel, 1 game ports
ATI Wonder PCI 1MB SVGA card
MAG DX15F 15" SVGA monitor (1280 x 1024 0.28 dot, green LR)
Enhanced 101 keyboard
MS 2 B mouse
Mid size tower case with 250W power

pentium

WARRANTY

DX-60 $2430

DX-60 $2990

Video Card	
Cirrus Logic 1MB VLB	$ 109
ATI Mach32D 1MB VLB, PCI or ISA	$ 139
ATI Mach32D 2MB VLB, PCI or ISA	$ 219
ATI Mach64D 2MB VLB PCI or ISA	$ 279
ATI Mach64V 2MB VLB PCI or ISA	$ 389
Monitor	
Orchestra 17" NI 60Hz Green	$ 299
Daytek 14" NI 72Hz	$ 319
Samsung 14" NI 76Hz	$ 379
CTX 15" NI 72Hz LR	$ 429
Daytek 15" NI 72Hz LR Green	$ 459
Mag DX15F NI 76Hz LR Green	$ 509
Viewsonic 15G NI 76Hz LR Green	$ 589
CTX 17" NI 72Hz LR	$ 839
Mag DX17F NI 76Hz LR Green	$ 699
Viewsonic 17G NI 76Hz LR Green	$1199
Scanner	
Scanman 256 OCR	$ 219
Scanman color 800dpi OCR	$ 349
Mustek Scanmagic 700dpi OCR	$ 359
Mustek Drop Artist Pro 800dpi OCR	$ 455
Plustek Color sheetfeed 600dpi	$ 549
Scanjet IIP desktop	$ 649
Scanjet IIcx Color desktop	$1368
Microtek SP Color desktop	$1089
Modem	
US Robotic Sportster 14.4 internal	$ 149
US Robotic Sportster 14.4 external	$ 1[illegible]
US Robotic 28.8 internal V34	$ 31[illegible]
US Robotic 28.8 external V34	$ 33[illegible]
Harddisk	
Quantum 365 MB 11MS 256K	$ 259
Maxtor 420 MB 12MS 32K ATA	$ 279
Conner 420 MB 12MS 64K	$ 279
Maxtor 540 MB 12MS 32K ATA	$ 319
Quantum 540 MB 12MS 128K	$ 319
Seagate 540 MB 12MS 256K ATA	$ 379
Quantum 1.0 GB 9MS 256K SCSI	$ 829
Printer	
Canon BJ200e 360x360 dpi	$ 319
Canon BJ4000 720x360 dpi color	$ 719
HP Deskjet 540 600x300 5pi	$ 409
HP Deskjet 560C 600x300 dpi color	$ 699
Canon LBP430 laser 300x300 dpi	$ 799

MultiMedia

Digital School House 16 $379

Game Blaster 16 $539

Discovery CD 16 $359

Multimedia Office 16 $719

Sound Card	
Sound Blaster 16 Value Ed.	$ 129
Sound Blaster 16 MCD	$ 189
Sound Blaster 16 SCSI	$ 239
Sound Blaster 32 AWE	$ 359

CD ROM	
Panasonic 562 2X speed	$ 169
MicroSolution 2X backpack	$ 469
Plextor 4X speed int. SCSI	$ 475

CD TITLES	
Arthur's Teacher Trouble	$ 24
Compton's Encyclopedia 95	$ 45
Lost Path	$ 24
Grolier 4 pack 94	$ 30
Iron Helix	$ 26
Just Grandma and me	$ 24
Lawnmower man	$ 38
MacMillan Dictionary	$ 25
Mayo Clinic Family health	$ 19
National Geographic Mammals	$ 24

Networking

COMPLETE KIT FOR 2 USERS

Novell Personal Netware	$ 319
Lantastic 6.0	$ 369
Universal Ethernet Card (3 ports)	$ 99
Jumperless Ethernet Card (2 ports)	$ 69
D-Link 10 Base T Card	$ 99

SYSTEM UPGRADES

486SLC-66	$ 650
486DX2-66	$ 490
Pentium 90	$ 850
4MB Ram	$ 200

TEL: (905) 477-9838
1-800-507-6226
FAX: (905) 477-7887

Softec business computer

7170 Warden Avenue, Unit 19 Markham, Ont, L3R 8B4
Mon Fri 9:30am to 7:00pm Sat 10am to 5pm
All prices are 3 % cash discounted

AccountPro Systems Inc.

Offering. .

ACCPAC Plus 6.1 upgrade

Accounts Receivable Accounts Payable General Ledger . Order Entry . Inventory Control

for only $ 249.00 per module

(Multi-currency)

- AccountPro specializes in ACCPAC Plus installation, training, consulting services and data repair
- AccountPro has been appointed as Gold Business Partner by Computer Associates

ORDER YOUR ACCPAC Plus UPGRADE TODAY

Tel:(905) 475-2066
Fax (905) 479-1045
AccountPro Systems Inc 160 Konrad Cres Markham Ont., L3R 9T9

Tanisys SpinWizard

One of the major thrusts of most Windows desktop replacement/enhancement utilities lies with the search for a better metaphor than the somewhat contrived program manager/file manager interface most Windows users have to put up with

One innovative if slightly unusual alternative comes from Tanisys Technology – a Vancouver Stock Exchange trading company with headquarters in Austin Texas (where it moved this year from Vancouver) and its new SpinWizard. This is a $49 95 desktop utility that provides you with an on-screen eight sided cylindrical tube onto which you can place icons that represent desktop objects, including both files and applications. SpinWizard gives you room for up to 12 icons per side of the cylinder

The "spin" part of SpinWizard comes into play when you want to move from looking at one face of the cylinder to another This is accomplished by "spinning the cylinder so that it presents a different face with a new set of icons You can set it up so that different faces of the cylinder will be used for either different types of documents or different applications To get to the right face, you spin the cylinder — or just point to the color of the section of the cylinder you want to use and SpinWizard will go directly to it

While this is fun — and it does offer a considerable change from the standard Windows interface — we have to question whether it really offers you much more than you would get by organizing your program manager desktop a little better Certainly it brings a lot of features together in an interesting way, but we did not find this a compelling reason for longterm use

Ready, Aim, FILE!

A much better — and much more specific — improvement to Windows 3 1 comes in the form of VSoft Development s Ready Aim FILE! which gives you the ability to use 256-character file names in Windows without having to wait for next year's Windows 95

Ready, Aim, FILE! installs itself as a standard Windows application and provides you with the ability to build "filing cabinets" and "folders" of your existing documents organized in groups of document types A cabinet might contain a number of folders including one, for example, with all the WKS documents held in the INVOICES directory, while another might hold all the DOC files in the LETTERS directory

Having created these folders, Ready, Aim, FILE! offers you the chance to create 256-character long file names for each of the documents in the folder You can also attach subject, author recipient and status information as well as a short comment about the documents contents Searches can be carried out within and across filing cabinets for such long file named documents using all of the above as search criteria

Perhaps even more usefully, Ready Aim, FILE! can be set up to intercept the Open and Save As dialog boxes of many popular Windows applications and replace them with new ones that allow you to assign long file names to new documents when they are created.

To our minds this is where Ready Aim, FILE! would be most useful It is a bit tedious to go through all your old data files and give them new long files, but if you can start using a newly-configured system that works with long file names from the outset it makes for a much more cohesive working environment

Ready Aim FILE! also automatically creates a DOS file name for your long file named documents although it also gives you the option of over-riding this and choosing both the long and short file names of your documents

This is an extremely useful utility and we would recommend it to anyone who is installing a new Windows system as well as those patient enough to make the most of the product with old data files by going back and giving them long file names. ❑

Contacts

IMSI	416-464-7101
Landmark Research International Corp	800-663-6696
Tanisys Technology Inc.	1-800-459-7748
VSoft Development	416-873-9875
Winwear	206-882-1530

MICROJACK
MULTIMEDIA SERIES

Bridging the Worlds of Video and PC

VGA TO VIDEO CONVERTER
JACK Selection

Run your VGA or MAC display on your TV!

- Supports Windows 3.0 and 3.1
- Built-in Flicker Free filter
- Supports all IBM standard display modes and Hi-color modes (256/32K/64K colours).
- Resolution up to 640 x 480 in NTSC TV system or 800 x 600 for PAL TV system
- Underscan/Overscan and TV brightness control
- Input: Standard VGA
- Output: Composite Video, S-VHS Video, RGB (15 KHz) and VGA (31 KHz)

$275

Jack Selection is an external VGA to Video converter which can be used on any PC laptop or notebook. Displaying up to 800 x 600 SVGA resolution on both the VGA monitor and the television set Jack Selection comes standard with a flicker filter, positioning software video cables and power supply. It also supports 3 video formats — S Video composite and RGB — in one of two video standards, PAL or NTSC.

VGA TO VIDEO CONVERTER
MICROJACK III

The latest video converter – with more features and flexibility!

$675

- Second generation Flicker Free Filter
- Supports all IBM standard video modes & high colour modes (256/32K/64K colours) resolution up to 800x600 in both NTSC and in PAL
- Supports Macintosh standard modes (640x480, 31 or 35 KHz)
- Full Underscan and Overscan
- Input: VGA 15-Pin Connector
- Output: Composite RCA Connector, S-Video Connector
- Directional Panning with zoom
- Screen Freeze/Unfreeze

Jack^3 Selection, the latest addition to MicroJack Multimedia's bestselling video converter series, bridges VGA to video and offers the maximum flexibility for all your needs. Features include: second generation flicker-free filter, full over/underscan, panning with zoom, plus remote control function. Jack^3 Selection is easy to use – it requires no software drivers and it has its own power supply! The Auto Mode Detection feature ensures optimum performance on any platform.

FULL MOTION VIDEO CAPTURE AND DISPLAY
MICROJACK Video Commander

$499

Record and display full-motion video on your computer!

- Inputs: Three selectable composite NTSC/PAL video inputs
- Supports IBM standard video modes and Hi-color modes (256/32K/64K colours)
- Output: Standard VGA signal
- Real time two dimensional panning
- Fractional scaling up to 1024 x 1024 pixels
- Flexible memory configuration allows easy setup and prevents conflicts with system RAM or other peripherals

MicroJack Video Commander is the perfect video add-on for your multimedia system. It offers full-motion true colour video capture and windowing at up to 1024 x 768 resolution. The included Windows software will export your images to many formats for use in editing, presentation and publishing software.

VGA TO VIDEO OVERLAY
MICROJACK TitleMate

- Supports two video modes Computer–displays video data in memory Overlay–displays external video overlayed with on board memory video data
- Displays 256 of 256K colours
- Overlay colour: 1 of 256 colours
- Display resolution: 640 x 480 (NTSC) or 640 x 512 (PAL)
- 512 KB on board memory
- Video Input: Composite Video with RCA connector
- Video Output: Composite Video with RCA connector

$399

Add captions and graphics to your video presentations

The **MicroJack TitleMate** is a video overlay board, ideal for use in educational training and instructional video presentation. Add captions and graphics onto video sources from VCR, Camcorder or LaserDisk. Included is MicroJack Titler titling software which uses Windows True Type fonts. Font size, styles (3D effects, shadows and borders) and colour are all selectable.

MicroJack is a registered trademark of MIT Computer Supplies Co. Ltd. Prices and specifications are subject to change without notice.

MIT
COMPUTER SUPPLIES CO. LTD

40 SHIELDS COURT, UNIT 1-2
MARKHAM, ONTARIO L3R 0M5

TEL: (905) 946-0908 or (416) 321-2259
FAX: (905) 946-8749 or 1-800-463-3186

Monday to Friday 9:00 AM - 6:00 PM

Digital Photography Becoming Affordable

BY GEOF WHEELWRIGHT

Desktop publishing has made it easier for personal users to lay out text in multiple columns, add computer-drawn graphics, insert headlines, produce charts and include tables. One glaring failure in most PC-based document production systems has been the challenge posed when users want to insert photographic images in their work.

Traditionally, users have either had to obtain pre-scanned photographic images on a CD-ROM (by paying a film processing company to have their film processed onto a Compact Disc using Kodak's PhotoCD system) or buy themselves an image scanner that will "photocopy" images into the computer for editing and placement. Both processes have been time-consuming, expensive and frustrating, particularly for users who only need to add simple photos to their insurance adjustment forms, real estate sheets, product catalogs and design mock-ups.

Enter the digital camera. These devices — whose prices have dropped to around $1 000 — allow users to shoot images directly into a digital camera, where they are stored as image files that can be transferred to a desktop computer for use in desktop publishing and image-editing applications.

The most high profile recent entrant to this growing market is Apple Computer's QuickTake 100, a flashy, $1,030 handheld camera that looks like a cross between a pair of binoculars and a small spaceship. It weighs slightly less than a pound and provides the ability to store up to 32 "standard resolution" pictures (held as 320 by 240 pixel images in 24-bit color) or eight "high resolution" ones (stored as 640 by 480 pixel images).

These image files can then be transferred to either Apple Macintosh or IBM-compatible computers running Microsoft Windows and then placed into publishing or image-editing packages. The camera also uses standard rechargable AA batteries, so users can buy and use ordinary AA batteries if they haven't got time to recharge between uses. The camera holds its images in computer memory while the battery is changed so that users don't lose whatever pictures they have already taken.

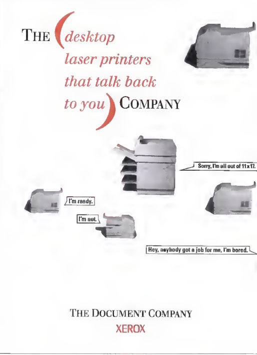
Pros Use High-end Digital Cameras

But Apple's QuickTake, developed in partnership with photography giant Eastman Kodak, is not the only offering on the market. Kodak itself offers much more upmarket models, the Kodak DCS 100 and 200, which cost $8 000 and $10 000 respectively. These systems are built for use by professional photographers who must also have a strong interest in the use of digital cameras.

Some photojournalists and newspapers have already started using digital cameras in the field. This means that photojournalists are able to join print scribes in sending their work as computer files via "modem" over telephone lines. There is no waiting for the lab to develop the film, no dashing to get the processed film to a courier and no nail-biting wait at the picture desk.

Photographers covering recent events such as the 1992 Winter Olympics and the Persian Gulf war pioneered professional use of digital cameras and they are expected to continue gaining popularity as the resolution and quality of the captured image files improves — particularly for color photos, the transport

➤


THE *desktop laser printers that talk back to you* COMPANY

Sorry, I'm all out of 11x17.
I'm ready.
I'm not.
Hey, anybody got a job for me, I'm bored.

THE DOCUMENT COMPANY
XEROX

multimedia

[illegible] which has traditionally provided [illegible] photographers with their biggest logistics problems.

According to a survey released earlier this year by US-based research firm BIS Strategic Relations almost 600 000 digital cameras will have been sold by the end of 1998 a vast increase on the modest 97 000 units the company predicts will be sold this year Accompa[illegible] is likely to be a growth in the [illegible] use of digital image editing software [illegible] which was brought to light this summer through the creative marketing efforts of a Vancouver-based image processing company

Get Outta My Life

The company has lent new meaning to the phrase "cutting someone out of your life" Vancouver based Western Pro Imaging Labs this summer launched a new service for divorced people called DivorceX that allows them to digitally "cut out" their often despised ex-spouses from family photos and replace them with backgrounds that make it look like the spouse was never there

According to company president Keith Guelpha it is even possible to manipulate the photo so that an ex spouse can be replaced with the current spouse in a favourite photo The technology behind the service is nothing new or earth shattering — just a good color scanner some high-end image editing software and the ability to output to photographic paper photographic film or color laser devices.

Guelpha says his technicians scan the photo into the computer use digital image editing tools to "cut out" the offending spouse and then recreate the background where they would have been using elements of the existing background to create the new one In order to do a professional job Guelpha says the service takes two to three weeks and costs between $100 and $150 per photo

Customers do however, receive photographic negatives of the new photo so that they may have as many copies of it made as they like at any standard commercial photo finishing outlet

Despite the insistence by Guelpha and others that they do their utmost to ensure the technology does not get misused, the increasing use of digital imaging software to "polish" photos could soon render meaningless the old adage that "The camera doesn't lie" ❑

StarGate Revealed on CD-ROM

NB — Compton's New Media has released the Secrets of Stargate CD-ROM in conjunction with the film premiere of Stargate

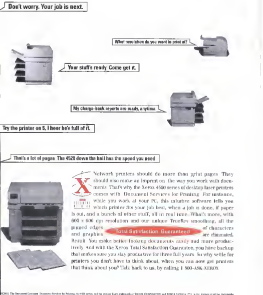
According to Steven Marder director of licensing and strategic partnerships, music and entertainment at Compton's this is the first simultaneous release of a film and related CD The CD will offer extensive background on all aspects of the production design of the science fiction film, from storyboard or sketch to the final product Also included will be music, clips and interviews with cast and crew

Stargate which was released in mid October by MGM has the time honored elements of aliens spacecraft and interdimensional travel embedded in an Egyptian inspired environment. With 700 stills and 500 storyboards linked to interviews and clips Secrets of Stargate CD "is very compelling because of the epic nature of this film and the way it assists the viewer to see the myriad of fascinating elements that went into it" Marder sees the CD's audience as "the fans of science fiction and special effects as well as the average film viewer who wants a greater understanding" of large-scale effects-oriented film production

Stargate the movie stars Kurt Russell James Spader and Jaye Davidson Interview questions are indexed allowing the user to skip those not of interest

Secrets of Stargate CD was produced and developed by The Software Department and is distributed exclusively by Compton's. All images are copywrited and there is no print function A cartridge-based game is currently in development by Acclaim Entertainment The CD ROM retails for $39 95 and is a hybrid supporting Windows MPC and Macintosh

Contact: Compton's New Media 818-929-2532


Don't worry. Your job is next.

What resolution do you want to print at?

Your stuff's ready. Come get it.

My charge-back reports are ready, anytime.

Try the printer on 5, I hear he's full of it.

That's a lot of pages. The 4520 down the hall has the speed you need

Network printers should do more than print pages They should also make an imprint on the way you work with documents That's why the Xerox 4500 series of desktop laser printers comes with Document Services for Printing For instance, while you work at your PC, this intuitive software tells you which printer fits your job best, when a job is done, if paper is out, and a bunch of other stuff, all in real time What's more, with 600 x 600 dpi resolution and our unique TrueRes smoothing, all the jagged edges of characters and graphics are eliminated. Result You make better looking documents easily and more productively And with the Xerox Total Satisfaction Guarantee, you have backup that makes sure you stay productive for three full years So why settle for printers you don't have to think about, when you can now get printers that think about you? Talk back to us, by calling 1 800-ASK-XEROX

Total Satisfaction Guaranteed

XEROX The Document Company Document Services for Printing, the 4500 series, and the stylized X are trademarks of XEROX CORPORATION and XEROX CANADA LTD [illegible]

North York

雙橋 TwinBridge™ ツインブリッジ

Chinese and Japanese System
for 30+ Windows programs
(Runs under any English Windows & OS/2)

中日文系統

Works with Access, Auto CAD, Corel, Excel, FrameMaker, Lotus 1 2-3, Fox Pro, Power Point, Harvard Graphics, Publisher PageMaker, QuarkXPress, WinFax Pro, Word, Word Perfect etc.

多種字體
電腦排版軟件
中日英語共用
十餘種輸入方法
繁簡字體互換使用
支援手寫筆

VITEC product
Specialized in Video capture, compress, playback

VIDEO MAKER, Only $649:
- Records from Camcorder/tape to computer
- 45 sec. MPEG video on a diskette
- Photo like freeze frame, 16 million colors
- Free software for MPEG decompression
- Works with most sound cards

MPEG Maker, Only $259
- Software converts avi files to MPEG
- 30 full frames/sec
- 16 million colors

Cinerama Only $599
- MPEG playback card
- 30 full frames/sec
- 64K colors
- Hi Fi audio

Authorized Dealer Maxibyte Inc
Tel (416) 250-6254 Fax(416) 250-6873
#c12A North York City Centre
5150 Yonge Street North York M2N 6L8
(North York Centre subway)
Distributed by Luminar Multi Media
Phone (416) 490-6516
Fax (416) 490-6419

multi*media*

Amnesty International Interactive Human Rights CD

BY NICK ANIS

NB — Multimedia software developer, Voyager has produced an interactive CD-ROM for Amnesty International covering the history and evolution of human rights

Amnesty International was founded in 1961 and currently has 1 1 million members working for "human rights " The organization s mandate is to work for the "advancement of human rights," including the freedom of "prisoners of conscience," and to work for "fair and prompt" trials for political prisoners

The interactive multimedia CD-ROM chronicles Amnesty International's human rights efforts and human rights conditions throughout the globe The CD is designed as a human rights educational tool but it is very much a consumer product as well.

Ignition s Ray Kristof pointed out to Newsbytes that, in spite of the fact that part of Amnesty's work is to monitor and chronicle abuse and torture that is not what this product is about Kristof emphasizes the CD is "interesting, upbeat, uplifting and not just a negative look at abuses going on around the world "

The narration is by science fiction screen star Leonard Nimoy (Star Trek s Dr Spock), who is also well known for his film narrations Nimoy joined the project and donated his services at the request of his daughter in law Nancy Nimoy who also donated her time to do many of the illustrations.

The CD is reportedly filled with a rich diversity of cultural styles in music art and design and includes five topic areas.

The "Rights" section represents the universal declaration of human rights and presents 30 articles through animation, narration, and text The "Ideas" section has a timeline of human rights history and presents the people ideas, and events that contributed to human rights history from 2000 B C to the present.

The "Stories" section has a collection of photographic portraits from leading photographers accompanied by the stories of former "prisoners of conscience" from Amnesty International case files The "Places" section is a world atlas/almanac of human rights and living conditions of 100 countries around the world

The "Voices" section is a "call to action/what you can do" section that contains video interviews with a variety of people discussing what individuals can do through the various organizations The section also includes hundreds of pages of reference documents in electronic form which Ignition says are provided for "teaching and learning "

The CD's soundtrack was created by luminaries of world music and rock from Amnesty benefit concerts and events and also from scores done specifically for the CD as arranged by Ignition.

The company says that Amnesty Interactive is a non profit educational project produced entirely by donated services from artists, entertainers and multimedia specialists around the world

Ray Kristof, a producer at Voyager was the project s director and producer Other members of the design team also from Voyager include Amy Salran who was the business and project manager and Eli Cochran, who was the principle programmer and co-designer

The CD is being distributed for US$10 to cover materials and marketing as a "public service" by Voyager The Macintosh version is now shipping. A Windows version was to be available in November ❏

Contact: Voyager 800-446-2001 or 212-431 5199

MPT

GOOD SERVICE, GOOD PRICES, ALL THE TIME *

Business Hours: 10am - 7pm Monday - Saturday

Sheppard Ave.
Kennedy Rd
MPT
Midland Ave.
Hwy 401
N

We are located in the WINCO BUSINESS PARK, exactly 1 traffic light south of Sheppard Ave
2370 Midland Ave, Unit A10, Toronto ON, M1S 5C6 tel (416) 292-0533 fax (416) 512-7906

486DX/DX4 3.3v / 5v VLB mainboard 256k, no cpu SIS chipset, ZIF 30 / 72pin simm slots 128mb max, 3 x vlb slots deep green	$139
S3 VLBus 1MB SVGA GUI ULTRA accelerator true 32bit access built in true color DAC 1280 x 1024 2mb maximum display memory	$119
32MB 72pin 70ns SIMM RAM, 5yr warranty, 8MB 72pin 70ns $377 2MB 72pin 70ns, $90 Call for bundle ram+cpu+board prices!	$1177
4MB 30pin 70ns SIMM RAM, 5yr warranty, many different 30pin and 72pin simm in stock call for price and availability	$185
NOTEBOOK 4mb memory card,ICDRAM,	$188
340MB SCSI HDD, 64k cache, 12ms, many different IDE hard drive sizes in stock at great prices call for more information	$275
520MB SCSI/2 HDD, 256k cache, 9ms,	$399
IBM ThinkPAD 4mb upgrade module (ICDRAM)	$199
2 0GIG SCSI/2 HDD, 512k cache, 9ms,	$1444
2 0GIG SCSI DAT backup, 4gig of tapes (2),	$999
Adaptec 1522 / 1542CF SCSI/FD BUNDLE,	$122 / $279
true 16bit comp sound card, cdrom interf., spkrs, mic,	$117
SBpro comp sound card, cdrom interf., spkrs, mic,	$88
SB 2 0 comp sound card, speakers, phones,	$49
Microsoft serial JMOUSE with v9 01 drivers,	$36
MS DOS 6.2, $39 MS WINDOWS 3.1, $48	
Super IO 2Ide/2fd/2com/1printer/1game ports, cables, 2s / 1p / 1g I/O card w 16550 UART $29	$17
Aamazing 14" 28dp SVGA non-interlaced monitor, Aamazing 15" .28dp SVGA non-interlaced monitor $469	$299
Fujitsu 3 5" HD 1.44M Floppy disk drive w dlx cable,	$46
ACER 101key slimline softouch AT keyboard,	$22
16BIT NE2000c Novell certified CARDS, 5yr warr., cables ends & terminators available to complete your network!	$55
PLANTRONICS PLX pro HEADSET phone w dialer,	$120
BIG Tower, 10bays, 300w, 2fans, door, wheels, LED, MINI Tower 5 bays 220W csa P/S $69 MID Tower 6 bays, 220W csa P/S $74	$222
HP LASERJET 4, 600dpi, 2mb ram, demo, 1yr warr	$1380
ABCD shielded printer switchbox w M-M cable,	$36

Many more items in stock! Drop by for a full price list
We also sell custom configured systems at great prices
prices are cash discounted & subject to change (hopefully lower!)

Throne Computer Systems
Christmas Special !!

4810 Sheppard Ave E.,
Unit 224, Scarborough
Ont M1S 4N6
Tel: (416) 609-1668
Mon Sat 10 am 6 pm
Sunday 12 pm 4 pm

** Leasing option available

Super VGA Multimedia Systems

Multimedia 486

4 Meg 70ns memory 128K cache VESA bus
420M IDE Hard Drive
Japanese 1.44M Floppy Drive
VESA IDE w/ parallel, 2 serial, game ports
Keytronic/Mitsumi 101 enchanced keyboard
Med Tower 7 bays & 230W Power Supply
Trident VESA 1 Meg Super VGA Card
14" .28 Non-interlaced 1024 color monitor
Sound Blaster 16 bits stereo sound card
Panasonic Double Speed CD ROM
Mitsumi mouse, Stereo Speakers
Pentium P24T CPU socket motherboards
Built in Math Co Processor

Software include:
100 Meg Programs (see below)
MS DOS 6.2, Windows 3.1 with manuals & disks

6 CD Disc Titles
1) Window MPC Encyclopedia
2) The Animals
3) Chessmaster 4000
4) World Atlas with Movies
5) U.S. Atlas with Movies
6) Mavis Beacon Teaches Typing

2 years labour & 1 year parts depot warranty

Intel 486DX-33 **$1749.-**
AMD 486DX-40 **$1809.-**
Intel 486DX2-66 **$1879.-**

PCI Professional Systems

486DX2-66...128K $2080.-
Pentium-60..256K $2489.-
Pentium-66..256K $2649.-
Pentium-90..256K $2950.-

PCI Bus

Package include
Intel CPU 8 Meg 70ns memory
540M IDE Hard Drive
Japanese 1.44M Floppy Drive
PCI IDE Hard Drive Controller
2 Serial 1 Parallel & 1 Game ports
Keytronic / Mitsumi 101 enhanced keyboard
Med-Tower 7 bays & 230W Power Supply
ATI Mach 32 PCI 1 Meg Super VGA Card
15" .28 Non-interlaced flat screen Green Low Radiation Super VGA color monitor
Mitsumi MS compatible mouse
Built-in math co-processor
** Free 100 Meg of Programs **

Software include
100 Meg Programs (see below)
MS DOS 6.2 Windows 3.1 with manuals & disks

2 years labour & 1 year parts depot warranty

100M Programs

Super Special Package !!

486SX-33.....**$1359.-**
486DX-33.....**$1399.-**
486DX2-66..**$1529.-**

Special Package include
Intel CPU on SX-33, DX33 & DX2-66
128K cache VESA Bus motherboard
4 Meg 70ns memory
420M IDE Hard Drive
Japanese 1.44M Floppy Drive
VESA IDE with Parallel, 2 Serial, Game ports
Mini Tower 230W CSA Power Supply
Trident VESA 1 Meg Super VGA Card
14" .28 Non-interlaced Super VGA color monitor
Keytronic Mitsumi 101 enchanced keyboard
Mitsumi MS compatible mouse
Built in Pentium P24T CPU socket
Built in math co-processor in all 486DX, DX2
MS DOS 6.2, Windows 3.1 with manuals & disks
2 years labour & 1 year parts depot warranty
** Free 100 Meg of Programs **

Upgrade Options:	
540 / 540 Meg Hard Drive	$ 25
15" .28 flat screen L-R Green	$ 4
8 Meg RAM total	$2
Panasonic 2X floppy drive	
Lsw MS DOS 6.2	$4
Lsw MS Windows 3.1	$2

Super VGA Systems

486SX-33

$1129.-

Package include
Intel CPU
128K cache VESA Bus motherboard
Motherboard upgradeable to DX/DX2
4 Meg memory
420M IDE Hard Drive
Japanese 1.44M floppy Drive
VESA 2 Serial, Game ports
Mini tower case 230W CSA Power Supply
Trident Super VGA Card
14" Super VGA color monitor
101 enchanced keyboard
Mitsumi Ms compatible mouse
Built in Pentium P24T CPU socket
2 years labour &
1 year parts depot warranty
** Free 100 Meg of Programs **

Multimedia Upgrade Kit

only **$350.-**

Panasonic Double Speed CD ROM
Creative Labs Sound Blaster 16 bits stereo sound card
Stereo Speakers
6 Windows CD Disc Titles
1) Window MPC Encyclopedia
2) The Animals 94
3) Chessmaster 4000
4) World Atlas with Movies
5) U.S. Atlas with Movies
6) Mavis Beacon Teaches Typing 2.0

CREATIVE

Free 100 Meg Programs

All *Throne* Computer Packages come with free 100 Meg programs bundle includes.
Games Spreadsheets Word Processing Home Organizer Store phone/ Appointment programs Educational & Tutorials Music Personal and business finance programs Database [illegible] Virus Scanning & Cleaning Windows software & Demos etc.

**** All prices are already 3% discounted for Cash Money Order, Certified Cheque or Direct payment (Interac) VISA, Master Cards or Government P.O are on regular prices (Regular price = Cash discounted price + 3%).** Government educational institutions & corporate p.o are welcome shipping cost is extra Prices are subject to change without notice.

MOTHERBOARDS & CPU

386SX-40	$ 89
386DX-40 128K	$ 165
486SX 33 128K Intel/vesa	$ 235
486DX-33 128K Intel/vesa	$ 279
486DX-40 128K AMD/vesa	$ 335
486DX2-66 128K Intel/vesa	$ 396
486DX2-66 128K PCI	$ 479
Pentium 60 256K PCI	$ 889
Pentium 66 256K PCI	$1040
Pentium 90 256K PCI	$1510
Cooling Fan for 486 CPU	$ 12
Cooling Fan for Pentium CPU	$ 25
Intel 486 DX2-66 CPU (call)	$ 295

DRIVES & CONTROLLERS

IDE Conner 420M 12ms	$ 274
IDE Fujitsu 250M 12ms	$ 224
IDE Maxtor 540M 12ms	$ 309
IDE Quantum 420M 14ms	$ 274
IDE Quantum 540M 12ms	$ 319
SCSI Quantum 1.08GB 9.5ms	$ 849
SCSI Quantum 1.44GB 9.5ms	$1129
SCSI Quantum 2.16GB 9.5ms	$1600
IDE Samsung 420M 12ms	$ 265
IDE Seagate 450M 14ms	$ 282
IDE WD 540M 12ms	$ 365
IDE WD 730M 10ms	$ 470
IDE WD 1.08GB 10ms	$ 700
Conner Int 250M TapeDrive	$ 225
Jumbo Int 250M Tape Drive	$ 225
Jumbo Int 350M Tape Drive	$ 249
Trakker 250M TD	$ 409
Trakker Ext.350M Tape Drive	$ 489
Tape DC2120 250M	$ 24
Panasonic 5 1/4 1.2M	$ 59
Sony/Panasonic 3 1/2" 1.44	$ 45
IDE FD&HD controller	$ 19
IDE FD&HD 2Ser/1P/1G cntr	$ 23
IDE FD&HD & 16550/1P/1G	$ 59
IDE PCI HD controller	$ 47
IDE VESA FD&HD controller	$ 31
IDE VESA FD&HD & 16550	$ 66
IDE VESA Enchanced IDE	$ 72
SCSI Adaptec 1522 for DOS	$ 118
SCSI Adaptec 2842 VESA kit	$ 346
SCSI Adaptec 2940 PCI kit	$ 429
AT I/O 2Ser/1P/1G ports	$ 19
AT I/O 2Ser/1P/1G 16550	$ 36

CASES with Power Supply

Desktop 5 bays 230W	$ 78
Mini Tower 5 bays 230W	$ 59
Med Tower 7 bays 230W	$ 79
Tall Tower digital 10bays 250W	$135
Power Supply 230W/250W	$ 48/63

MEMORY

* Please call to confirm prices

DRAM 44256-70	$ 9
SIMM 256-70/80	$ 19
SIMM 1M-70 30 pins (call)	$ 53
SIMM 4M-70 30 pins (call)	$189
SIMM 4M 70 72 pins (call)	$199
SIMM 8M-60 72 pins (call)	$413
SIMM 8M-70 72 pins (call)	$403
SIMM 16M 70 72 pins(call)	$865

MATH CO-PROCESSOR

ULSI 387SX, 16/20/25/33 Mhz	$ 39
IIT/ULSI 387DX 25/33/40 Mhz	$ 48

CD ROM

Panasonic Int 320ms 300k/s	$168
Panasonic Int 320ms 300k/s Kit	$179
Discovery 16	$348
Game Blaster 16	$538
Multimedia Office "New"	$730
Digital School house 16	$389

CD-ROM MPC Kit
Panasonic 562 CD Drive
Audio 1600 Stereo sound card
Audio & CD cables
Stereo Speakers
10 Pak CD Discs
$285

VIDEO & SOUND

Soundblaster Pro compatible	$ 58
Soundblaster 16 Value	$114
Soundblaster 16 MCD	$119
Soundblaster 16 ASP MCD	$215
ASP upgrade for SB 16	$ 46
Speaker (Basic)	$ 10
Speaker CP-18	$ 39
Active BEW speaker system	$ 99

KEYBOARDS

BTC 101 keys	$ 19
Digital 101 PS/2	$ 45
Honeywell 101 keys	$ 45
Keytronic E03106	$ 28
Keytronic E03600	$ 48
Mitsumi model U	$ 23
Mitsumi model R AT/XT	$ 36

DOT MATRIX PRINTERS

** 2 years Canadian Warranty

Citizen 220 24pins w/color kit	$268
Citizen color kit	$ 60
Panasonic 2130 24p No color	$279
Panasonic 2135 24p w/color kit	$329
Raven 2406(2023) 24 pins	$225
Raven 2407(2130) 24p No color	$279
Raven 2407c(2135) 24p w/color	$329
Raven 2467 24p wide Par/ser	$600
Color Kit for 2123/2406	$ 56
Samsung 2412 24 pins	$195

LASER & LED PRINTERS

Canadian warranty, not grey market
All printers come with toner
* Please call to confirm prices

Canon 430 4ppm 1M 300dpi	$ 775
Canon 430 4ppm 2M 300dpi	$ 835
Canon 860 8ppm 2M 600dpi	$1930
Digital 1152 4ppm 2m PS	$ 874
Digital 5100 8ppm 2m PS	$2640
HP 4L 4ppm 1M 300dpi	$ 909
HP 4ML 4ppm 6M Postscript	$1415
HP 4P 4ppm 2M 600dpi	$1328
HP 4MP 4ppm 6M 600dpi	$1909
HP 4 8ppm 2M 600dpi	$1699
HP 4+ 12ppm 2M 600dpi	$1950
HP 4M 8ppm 6M 600dpi	$2480
HP 4M+ 12ppm 6M 600dpi	$2630
HP 4Si 17ppm 2M 600dpi	$4320
HP 4SiMx 17ppm 10M PS	$5825
Oki 400e 4ppm 512K 300dpi	$ 710
Oki 410e 4ppm 2M 600dpi	$ 909
Oki 410e/ps 4ppm 2M 600dpi Postscript Appletalk	$1290
Panasonic 4400-1 1M 4ppm	$ 640
Panasonic 4400-1 with 2M	$ 680
Raven LP 410-1 1M 4ppm	$ 579
Raven LP 410-1 with 2M	$ 645

Canon Hewlett Packard, Okidata, Citizen, Panasonic, Raven Samsung Authorized

SCANNERS

HP ScanJet 3P	$ 679
HP ScanJet IICx, color	$1298
Logitech Scanman 32 w/OCR	$ 149
Logitech Scanman 256 w/OCR	229
Logitech Scanman Color w/OCR	385

INKJET PRINTERS

Canon BJ-100	$ 329
Canon BJC-4000 Color	$ 708
Epson stylus 800+	$ 339
Epson stylus color	$ 829
HP DJ310 portable "DEMO"	$ 299
HP DJ320 portable w/Feeder	$ 430
HP DeskJet 540	$ 415
Color Kit for DeskJet 320/540	$ 59
HP DeskJet 560C color	$ 679
HP DeskJet 1200C color	$2050
HP DeskJet 1200C/PS color	$3070

LASER ACCESSORIES

Canon BJ 100/200 Ink Cart	$ 32
Canon BJC4000 Black/Clr Ink	Call
Canon 430 memory 1M	$ 97
HP 4L memory 1M (HP)	$119
HP 3p,3p,3,3d 1M/2M	$129/199
HP 4,4p,4mp,4m memory 4M	$225
HP 4,4p,4mp,4m memory 8M	$445
HP Toner for IIP/IIP+/IIIP	$ 99
HP Toner for II/III /IID/IIID	$109
HP Toner for 4/4m	$159
HP Toner for 4L/4ml/4p/4mp	$ 99
HP DeskJet Black Ink Cart	$ 39
HP DeskJet Color Cart	$ 39
Oki 400e 1M memory	$155
Oki 400e/410e legal size tray	$120
Oki Image Drum OL400/800	$295
Oki Image Drum 400e/410e	$200
Oki 400/800 Toner	$ 35
Oki 400e/410e Toner	$ 34
Pana 4400/Raven 410 Toner	$ 45
Pana 4400/Raven 410 Drum	$140
Pana 4410/Raven 510 Toner	$148
Pana 4410/Raven 510 Drum	$ 49

VIDEO CARDS

Monographics	$ 25
Trident 512K	$ 56
Trident 1M 32 bits color	$ 82
ATI Gr Wonder 1M ISA/VESA/PCI	$149
ATI Gr Wonder 2M ISA/VESA/PCI	$229
ATI Gr Ult Pro 2M VESA/PCI	$329
ATI Gr Xpression 2M VESA/PCI	285
ATI Gr Tur Pro 2M VESA OEM	$395
ATI Gr Tur Pro 2M VESA org	$498
VESA Cirr Logic 5428 1M	$109
VESA Cirr Logic 5428 2M	$179
VESA Trident 9400CX 1M	$ 96
VESA Trident 9400CX 2M	$169

MONITORS

14 Datas TTL paper white	$ 125
14 Datas Mono VGA	$ 155
14 Datas 1024 .39	$ 254
14 MegaImage .28 NI Green	$ 299
15 Daytek .28 L-R Green	$ 445
15 MegaImage .28 L-R Green	$ 446
15 TVM .28 L-R Green	$ 525
15 Mitsubishi Diam. Scan 15FS	$ 635
15 NEC 3V 1024 .28	$ 659
15 NEC 4FGe 1024 .28	$ 928
15 Sony 15SF1 1024 .25	$ 640
17" KDS 1280 .28	$ 850
17 MegaImage 1024 .28 L-R	$ 880
17 Mitsubishi Diam. Scan 17FS	$1399
17 NEC 5FGP	$1650
17 Sony SE1 1600 .25	$1510
20" Mitsubishi Diam. Scan 20M	$2130
20" Sony 20SE 1600 .30	$2680
21 Mitsubishi Diam. Scan 21T	$3030
21 NEC 6FGP 1280 .28	$2940

MOUSE & OTHERS

Mitsumi mouse MS compatible	$ 15
Microsoft mouse v2.0 OEM	$ 40
Logitech Mouseman	$ 69
Logitech First Trackman	$ 83
GVC 16 bits ethernet card	$ 95
Optical Glass Filter	$ 35

FAX MODEMS

GVC 96/24 Int s/r fax Modem	$ 75
GVC 14.4 Int s/r fax Modem	$118
GVC 14.4 Int s/r fax v42v32 voice	$156
GVC 14.4 Ext s/r fax v42 v32	$146
GVC 28.8 Int s/r fax Modem	$281
GVC 28.8 Ext s/r fax Modem	$251
USR 14.4 Int s/r fax v42 v32	$156
USR 14.4 Ext s/r fax v42 v32	$165
USR 28.8 Int s/r fax Modem	$299
USR 28.8 Ext s/r fax Modem	$319
IO card with one 16550 port	$ 36

GAMES & SOFTWARE

10 CDs (Games & Util)	$ 48
7 Guest CD	$ 29
15 year Picture/Movie-R CD	$ 39
Aliens Ate my Babysitter (3.5)	$ 30
Animal Alphabet CD	$ 28
Auto Registry 94	$ 19
Colonization CD	$ 78
Cyber Race CD	$ 24
Dinosaur Safari CD	$ 30
Education Platinum CD	$ 30
F-117A Night Hawk CD	$ 28
Gabriel Knight CD	$ 32
Gunship 2000 CD	$ 28
Journeyman Project CD	$ 33
King Quest VI CD	$ 26
Macmillan Dictionary-Child CD	36
Mad Dog McCree II CD	$ 35
Master of Magic	$ 69
Mega Race CD	$ 26
Microsoft Bookshelf 94 CD	$ 54
Microsoft Encarta 94 CD	$ 53
MYST CD	$ 71
NHL Hockey 95 CD	$ 89
Outpost CD	$ 38
Rebel Assault CD	$ 48
Sim City 2000	$ 34
Space Hulk CD	$ 59
TFX	$ 39
X-Com UFO Defense CD	$ 69
Business Vision II (3.5 & 5.25)	135
CorelDraw 3 book & CD	65
Lotus 5 Windows upgrade	155
WP 6.0a Win upgrade (3.5/CD	136

EXPERT REPAIRS
for

Monitors, Terminals
Printers (Laser, Impact)
All IBM Compatiblea,
PS 2 & Apple Products

☑ All Work Guaranteed
☑ Surface mount component level repair
☑ 4 Hours response service contracts
☑ Student discount on repairs

FLAT RATE
$74.88
ALL BRAND OF 14" SVGA REPAIR
EXCEPT CRT & FLYBACK

ROSEBUD
Service of Microcomputers

693 Petrolia Rd.
Downsview, Ont
M3J 2N6
Tel: 663-7164
Fax: 663-0468

multi*media*

Audiotrix Pro Tops the Sound Charts

BY AMOS AND JOHN BITZAN

Product Audiotrix Pro sound card
From Mediatrix Peripherals Inc 455 King St W Sherbrooke PQ
Price $395

Earlier this year a new sound card was quietly released into the multimedia market Frankly we are convinced that this is the sound card that many gamers multimedia freaks and beginning computer musicians have been waiting for

Audiotrix Pro features hardware Sound blaster, Adlib compatibility and Windows Sound System compatibility, 16 bit sound playback and recording, Wavetable Synthesis and full General MIDI support!

It is based on the OPL4 chip set combining Wave Table and FM Synthesis and includes a General MIDI 2 MB Instrument bank and a 16-bit audio codec The card complies with MPC and MPC II standards and is compatible with Soundblaster Adlib and the Microsoft Windows Sound System

The Audiotrix card needs 286 or better CPU 6 MB hard drive space VGA monitor 2 MB RAM Speakers ship with the card but even MediaTrix suggests you purchase better quality speakers elsewhere

Installation

After installing Audiotrix Pro in our computer we started the DOS-based setup program It let us set IRQ I/O and DMA channels via software and installed the various utilities and sample files onto my hard drive Audiotrix Pro does not require you to set any jumpers to change the IRQ, I/O and DMA Unfortunately we quickly discovered that Audiotrix Pro had no volume control knob This means you have to control the volume with software.

Next, the setup program started Windows and installed its own program group and necessary drivers The setup program always explained what it was doing and what changes to make if you were doing a manual installation

It took us 25 minutes to total to install the hardware and software of Audiotrix Pro

General MIDI and Wavetable Synthesis

Audiotrix Pro's spec sheet stunned us when we first read it It seemed that whenever we had finished reading about one feature, we would spot another feature, and another great thing.

Right off the bat we saw that this card had joined a new trend among PC sound cards: Wavetable Synthesis. This card, however had implemented Wavetable Synthesis differently from the other new sound cards.

Audiotrix Pro uses an OPL4 chip set (made by Yamaha) for both its Wavetable Synthesis and its FM Synthesis Better yet Audiotrix Pro comes with a General MIDI 2 MB ROM instrument bank, which is much bigger than the 256 kilobyte RAM supplied with the Gravis Ultrasound

The OPL4 is a high-quality chip set and has been proven to be better at MIDI playback than other chip sets (specifically the Aria chip set used by the Aria 16 and DSP 16 sound cards) Indeed, our first tests that included the playback of MIDI files produced stunning results.

Audiotrix Pro comes with several applications to play back MIDI files The two DOS applications are PLAYMIDI and a Jukebox program PLAYMIDI is a command line driven program and Jukebox Pro is a graphical Jukebox style program with traditional PLAY STOP REWIND etc controls

Neither of these programs are spectacular in any way but they do the job In Windows you can use Jukebox for Windows This is the only program that supports

►

Canadian Business Automation Inc.
5172 Dundas Street West, at Kipling Tel. 237-0363

MAIL ORDERS ACCEPTED!!

SONY DOUBLE SPEED CD-ROM WITH INTERFACE CARD $169.00

COMPLETE SYSTEMS	
486SX 33MHZ	$1195 00
486SX 40MHZ	$1195 00
486DX 33MHZ	$1295 00
486DX 40MHZ	$1305 00
486DX2 50MHZ	$1345.00
486DX2 66MHZ	$1395 00
486DX4 100MZ	$1945 00
PENTIUM 66MZ	$2275 00
PENTIUM 90MZ	$[illegible]5 00

NOTEBOOKS	
IBM THINKPAD 360 MONO 486SX33 4RAM 170HDD	$2749 00
IBM THINKPAD 360CS COLOUR 486SX33 4RAM 170HDD	$3749 00
IBM THINKPAD 500 MONO 486SLC2/50 4RAM 170HDD	$1849 00
IBM THINKPAD 510CS COLOUR 486BL2/50 4RAM 170HDD	$2849 00
IBM THINKPAD 750CS COLOUR 486SL33 4RAM 170HDD	$4449 00
AMBRA SUBNOT 425SL 4RAM 120HD MONO PCMCIA	$1679 00
AMBRA SUBNOT 425SL 4RAM 170HD COLOUR PCMCIA	$2595 00
AMBRA SUBNOT 425SL 4RAM 120HD COLOUR	$2395 00

ONE DAY ONLY SUN NOVEMBER 20 SEAGATE 528MB HDD $315.00

NEW EPSON STYLUS 1500 COLOUR INKJET 720X720 DPI $825.00

STANDARD FEATURES
IDE Controller 2s,1p,1g, ports 4MB RAM,SVGA video 1MB 3.5" 1.44mb FDD 340MB HDD SVGA colour Monitor 0.28dp NI Mini Tower Case 220w p/s Keyboard Mouse

2YR WARRANTY

VIDEO CARDS	
TRIDENT 9000 512K	$ 54 00
TRIDENT 8900D 1MB	$ 82 00
TRIDENT 9400 VL-BUS 1MB	$ 95 00
C LOGIC CL5420 ISA 512K	$ 55 00
C LOGIC CL5422 ISA 1MB	$ 85 00
C LOGIC CL5424 VL BUS 1MB	$ 89 00
C LOGIC CL5428 VL BUS 1MB	$ 115 00
ATI WONDER MACH32D 1MB	$ 165 00
ATI ULT PLUS MACH32D 2MB	$ 225 00
ATI ULT PRO MACH32 2MB	$ 335 00
ATI VL-BUS OR PCI BUS	$ CALL

CORPORATE AND GOVERNMENT ACCOUNTS WELCOME

486DX GREEN BOARD 3 VESA SLOTS SUPPORTS SX, DX, DX2, DX4 256K CACHE EXP TO 1MB $119.00

SEASONS GREETINGS
BUY A MULTIMEDIA KIT AND RECEIVE A FREE JOYSTICK
BUY ANY SOUND CARD GET A FREE ZOLTRIX SPEAKER SET

SEAGATE 1.0GB SCSI HARD DRV 10MS $795.00

1 DAY ONLY SAT NOV 26 ZOLTRIX 14.4K S/R FAX/MDM $77.00

DEALERS WELCOME

THIS MONTH SPECIAL
FREE
EARPHONE SPEAKER SET, MS WORKS AND WINDOWS CDS WITH WITH EVERY MULTIMEDIA 486 SYSTEM PURCHASED

MOTHERBOARDS	
486SX 33MHZ(CYRIX)	$205 00
486SX 33MHZ(INTEL)	$225 00
486SX 40MHZ(UMC)	$205 00
486DX 33MHZ(AMD)	$305 00
486DX 33MHZ(INTEL)	$315 00
486DX 40MHZ(AMD)	$345 00
486DX2 50MHZ(AMD)	$365 00
486DX2 50MHZ(INTEL)	$385 00
486DX2 66MHZ(AMD)	$405 00
486DX2 66MHZ(INTEL)	$425 00
486DX4 100MZ(INTEL)	$995 00
PENTIUM 66MZ(INTL)	$1245 00
PENTIUM 90MZ(INTL)	$1465 00

MONITORS	
14" SVGA 0.39DP	$245.00
14" SVGA 0.28DP	$275 00
14" SVGA 0.28DP NI	$295 00
15" FLAT SCREEN NI	$445 00
17" FLAT SCREEN NI	$785 00

PRINTERS	
RAVEN RP9100 9PIN 192CPS	$ 195 00
RAVEN RP2405 24PIN 192CPS	$ 245 00
RAVEN RP2406 COLOR CAP	$ 295 00
RAVEN LP410 LASER 4PPM	$ 595 00
RAVEN LP470PS POSTSCRIPT	$ 985 00
EPSON STYLUS 800 INKJET	$ 335 00

COUGAR BLACK STEREO SPEAKER SPT 4WATTS $14.99

FINANCING AVAILABLE FOR QUALIFIED CUSTOMERS

HARD DRIVES	
256MB IBM	$215
360MB IBM	$239
340MB SEAGATE	$239
428MB SEAGATE	$285
450MB SEAGATE	$295
540MB MAXTOR	$345
530MB SEAGATE	$495
730MB W DIGITAL	$435
1 08GB W DIGITAL	$675

MULTIMEDIA	
PANASONIC DOUBLE SPEED CD DRV	$175 00
SONY DBL SPEED CD ROM DRIVE	$165 00
SB 2 COMPATIBLE SOUND CARD/SPKR	$ 45 00
SB-PRO CMPATIBLE STEREOSOUND CARD	$ 59.00
SOUND BLASTER 16 STEREO SOUND CARD	$125.00
BUNDLE SONY DBL SPD & AP1600 SOUND CRD	$221 00
BUNDLE PAN DBL SPEED & AP1600 SND CRD	$231 00
CD SHAREWARE ASSORTED	$9.50
CD TITLES MOST POPULAR	$CALL

IDE CONTROLLER VESA LOCAL BUS $24.00

MICROPHONE & EARPHONE SET $9.00

VISA

FAX/MODEMS	
ZOLTRIX 14.4KBPS S/R	$ 85 00
ZOLTRIX 96/24BPS S/R	$ 45 00
ZOLTRIX 14.4KBPS S/R EXT	$145 00
ZOLTRIX 14.4KBPS W/VOICE	$125 00
ZOLTRIX 28.8KBPS S/R INT	$185 00

All Prices are already cash discounted. An adjustmet of 2.5% will apply to credit card charges Prices Subject to change without notice.

Myraid COMPUTERS ...
built for the performance,
stand for quality, work for you.

intel inside

systems

Myraid
486-66MHz
VESA LOCAL BUS

FEATURES
- 486 motherboard, VL-bus, 128K cache, ZIF
- Intel DX2/66MHz CPU ■ 8MB 70ns RAM
- 3½" 1.44MB FDD ■ 540MB 11ms IDE HD
- VL-bus 1MB Video ■ 15" MAG NI Monitor
- 2S/P/G Multi Port I/O ■ Mini-tower 200W CSA
- Keyboard & Mouse ■ MS-DOS & Windows
- 2 year labour, 1 year parts Depot Warranty

8MB 540MB/15" Monitor
$2,088
Cash & Certified Cheque

Myraid
90MHz Pentium™
ISA · PCI

FEATURES
- Intel Pentium™ PCI motherboard 256K cache, ZIF
- 90MHz Pentium™ CPU ■ 16MB 70ns RAM
- 3½" 1.44MB FDD ■ 540MB 11ms IDE HDD
- ATI mach64 PCI ■ MAG 17" DX 17F Monitor
- 2S/P/G Multi Port I/O ■ Full-tower 250W CSA
- MS-DOS & Windows ■ Keyboard & Mouse
- 2-year labour, 1 year parts Depot Warranty

16MB 540MB/17" Monitor
$4,388
Cash & Certified Cheque

Myraid
60MHz Pentium™
ISA · PCI

FEATURES
- Pentium™ PCI motherboard 256K cache, ZIF
- 60MHz Pentium™ CPU ■ 8MB 70ns RAM
- 3½" 1.44MB FDD ■ 540MB SCSI-2 HDD
- PCI Local bus SCSI-2 ■ 2S/P/G Multi Port I/O
- ATI mach64 2M PCI ■ MAG 15" NI Monitor
- MS-DOS & Windows ■ Mini-tower 200W CSA
- Keytronic Keyboard ■ Microsoft mouse
- 2-year labour, 1 year parts Depot Warranty

8MB 540MB/15" Monitor
$3,188
Cash & Certified Cheque

Myraid
Back-to-Work
WORKSTATION

FEATURES
- 486 motherboard, 64K cache
- Intel SX 33MHz CPU ■ 4MB 70ns RAM
- 3½" 1.44MB FDD ■ 340MB IDE HDD
- 1MB SVGA Video ■ 14" NI SVGA Monitor
- 2S/P/G Multi Port I/O ■ Mini tower 200W CSA
- Keyboard & Mouse ■ MS DOS & Windows
- 2-year labour, 1 year parts Depot Warranty

4MB/340MB/14" Monitor
$1,298
Cash & Certified Cheque

AST.
Premmia GXP/90
Multimedia System

FEATURES
- Pentium 90MHz CPU ■ 16MB RAM (to 192M)
- 3½" 1.44MB FDD ■ 730MB F SCSI HDD
- 2MB LB Video ■ LR 15 or 17 Monitor
- Mitsumi 2X CD-ROM ■ 16-bit Sound Card
- Speakers/Headphones ■ FlashROM, Plug-n-Play
- 16-bit Ethernet ■ 2S/P/IDE/SCSI Ports
- 5 ISA + 1 PCI slots ■ Desktop 200 Watts
- Keyboard & Mouse ■ MS-DOS & Windows
- 1-year On-site, 2-year Depot Warranty

15" Monitor	17" Monitor
$7,888	**$8,348**

Cash & Certified Cheque

NEC
Ready 4100M
Multimedia System

FEATURES
- Intel 486DX4 CPU ■ 8MB RAM (to 20M)
- 3½" 1.44MB FDD ■ 420MB Hard Disk
- NEC VLB 1MB Video ■ NEC 3V Monitor
- NEC 3X CD-ROM ■ 16-bit SB Sound Card
- Mic & Speakers ■ Encyclopedia CD
- [illegible] ■ AOL & CompuServe
- 4 ISA + 1 VLB slots ■ NEC Mini-tower Case
- Keyboard & Mouse ■ MS-DOS & Windows
- 1-year On-site, 2-year Depot Warranty

8MB 420MB/15" NEC 3V
CALL
Cash & Certified Cheque

PCMCIA

FAX/Modem	14.4K	9624	Cellular
MegaHertz	308	168	348
MegaHertz XJ	348	198	388
WorldPort	408	288	548
Networking PCMCIA	**Thin Coax**	**10BaseT RJ-45**	**Token Ring**
IBM	328	278	598
Megahertz	268	258	—
Xircom	368	298	668
Adaptec	SCSI 2		448
APEX	16-bit Audio		458
IBM	3270 Emulation		638

486 NOTEBOOKS

portables

AST ASCENTIA 800N (3-Year Worldwide Limited Warranty) 486SX-33MHz • 4MB • 340MB HD Trackball • PCMCIA Type 2, Dual-scan DOS & Windows **$2,888**

TOSHIBA 3400CT 486SX-33MHz • 4MB • 200MB HD Mouse-stick • PCMCIA Type 2, Ext. FD Drive • Active color 4.4-lbs DOS & WFW 3.11 **$2,888**

IBM ThinkPad 500 486SLC2-50MHz • 4MB • 170MB HD Mouse Stick • PCMCIA Type 2 DOS 6.3 & Windows 3.1 ONLY **$1,088**

GET READY FOR CHRISTMAS '94

mass storage

Hard Disks

345MB IDE Maxtor	$238
405MB IDE 256K	$278
420MB IDE WD	$298
540AV IDE Maxtor	$308
730MB IDE Quantum	$448
540MB SCSI-2	$488
1.0GB SCSI-2	$888
2.1GB SCSI-2	$1788

CALL FOR PRICES

SyQuest 3.5"
Removable Hard Disk

270MB Int. IDE	$698
270MB Ext. SCSI	$798
270MB Parallel	Call

DAT Backup Unit

EXABYTE (3 Yr Warranty)	
5-10GB Internal (8505)	$2988
5-10GB External (8505e)	$3088
2/4GB Internal (4200c)	$1388
2/4GB External (4200ce)	$1588
Colorado	
2-4GB Internal (PD-80)	$1588
2-4GB External (PDE-80)	$1888
Conner	
4GB Portable DAT (4400)	$1488

Tape Backup (QIC)

340MB internal	$400
700MB internal	Call
420MB internal	$288
340MB internal	$268
250MB internal	$228
Parallel Port Tape Drive	
Trakker 700MB	Call
Trakker 350MB	$400
Trakker 250MB	$488
Tape250 Parallel	$488

Software (DOS/Win) included

multimedia

2x-3x-4x speed CD-ROM Drives

Plextor 2x SCSI internal	398
NEC 2Xi int. w/Encarta	288
NEC 3Xp Plus portable	Call
NEC 4Xi internal SCSI	588
NEC 4Xi Kit w/Encarta	888

NEW!
Omni CD 3X
Internal SCSI CD ROM w/ Grolier Encyclopedia
$548

Sound BLASTER

SB 16 Basic Ed.	$198
SB 16 MCD ASP	$238
SB 16 SCSI-2 ASP	$288
SB 32 AWE ASP	$388
WaveBlaster MIDI	$228

Discovery CD 16 $348
■ SB16 ■ 2x CDROM ■ Microphone ■ Grolier Encyclopedia ■ 15 Titles

Digital Schoolhouse $388
■ SB16 ■ 2x CDROM ■ Speakers ■ Grolier Encyclopedia ■ 25 Titles

Game Blaster 16 $528
■ SB16 ■ 2x CDROM ■ Speakers ■ Joystick ■ Best-selling Game CDs

Multimedia Office $728
■ MS Office Pro CD ■ MS Encarta CD ■ SB16-ASP ■ 2x CDROM Drive ■ Microphone ■ Headphones ■ S/W

printers

Canon BJ-200 Black	$328
Canon BJC-4000 Color	$728
EPSON Stylus Color 720dpi	$888
EPSON [illegible] 800 Plus	$618

HEWLETT PACKARD
Authorized Reseller

HP DeskJet 320 Portable	$488
HP DeskJet 320 w/CSF	$548
HP DeskJet 560	$438
HP DeskJet 560C Color	$638
HP LaserJet 4L	$828
HP LaserJet 4P 600dpi	$1198
HP LaserJet 4+ 12ppm	$2048
HP LaserJet 4V 11x17"	$2888
HP Color LaserJet 8MB	$6888

video

SuperVGA
Graphics Accelerators

ATI mach64 Pro Turbo	488
ATI mach64 Xpression	308
ATI Graphics Wonder 1MB	188
Diamond Stealth 64 (VRAM)	528
Diamond Stealth 64 (DRAM)	288
Matrox MGA	568
Matrox Impression Plus	588

MATROX MGA POWER GRAPHICS ATI

17" Monitors

MAG DX17F .26	$988
Samsung .26mm	$1233
Sony MultiScan 17SE1	$1588
NEC MultiSync XE17	CALL
NEC MultiSync XP17	CALL

15" Monitors

MAG DX15F .26	$588
Mitsubishi 15"	$568
Sony MultiScan 15sf	$868
NEC MultiSync XE15	CALL
NEC MultiSync XP15	CALL

hardware

Adaptec
SCSI Host Adapters

1505	Total CD 16-bit	78
1515	Total Connect	138
1520B	ISA SCSI-2 adapter	188
1542C	ISA SCSI Master Kit	358
2842A	VLB SCSI Master Kit	388
2940	PCI SCSI Master Kit	438
2940W	PCI WSCSI Master Kit	538
358	Parallel Mini SCSI +	188
460	PCMCIA SCSI 16-bit	388

APC
AMERICAN POWER CONVERSION
Power Units & Accessories

Personal SurgeArrest	22
PowerManager center	98
Line-R conditioner 600W	188
Call-UPS remote UPS	138
Back-UPS 600VA	388
Smart-UPS 600VA	488
Matrix 3000 kVA	3888

Image Scanners

Logitech	
ScanMan 256 OCR	$275
ScanMan 32 OCR	$175
ScanMan Color	548
ScanMan EasyTouch	$298
ScanMan PowerPage	$638
EPSON	
ES-800C color 800dpi	$1288
HEWLETT PACKARD	
HP ScanJet 3P 256GS	$738
HP ScanJet IIcx Color	$1388
Microtek	
ScanMaker IIG Grey	$578
ScanMaker IISP Color	$1158
Scanter Color Ltr-size	$368
Scan-in-dex Card Scan	$298

communications

High-speed FAX-Modems

USRobotics Sportster	Internal	External
28.8K V.FC	$265	$295
28.8K V.34	$335	$365
Practical 14.4K	$148	$168
Apache 14.4K	$115	Software incl.

NEW LOW PRICES
USRobotics Sportster
14.4K V.32bis
Internal $136
External $158
Software incl.

Delrina
WinFAX PRO
VERSION 4.0
$98

DataStorm
Procomm Plus for Windows
VERSION 2.0
$158

accessories

Generic 3½" High-density 10 disk/box only $6.00

Athena 5¼" Double-density 4x10 disks/box only $10.00

3M DC-2120 QIC-80 Ximat Data Cartridge each $24.00

Government, Hospital, Educational Institution and Corporate P.O. ACCEPTED.
All prices in this ad are based on cash or cheque payment. Add 3% for P.O. or credit card payment. Sorry, no phone/mail order. All brands and company names are trademarks or registered trademarks of their respective owners. All prices and specifications are subject to change without prior notice.

SOGO

CORPORATE CENTRE
60 YONGE STREET
TORONTO, ONTARIO
TEL. 416 368 1122
FAX 416 368 1690

COLLEGE BRANCH
310 COLLEGE STREET
TORONTO, ONTARIO
TEL. 416 922 4741
FAX 416 922 6789

3.5" Floppy Disk Reliable & Durable

- We are a manufacturer under License of Sony™ Corporation
- Our disks are all 100% Tested & Certified Error Free with Guaranteed Clipping Levels
- Available products: 2HD 2DD, video tape, CD jewelry box
- Our own brand MEGA, OEM or bulk pack are also available.
- Duplicators & Wholesalers welcome.

YHC Cassette Ind. Ltd.
75 Saintsbury Square,
Scarborough, Ontario
M1V 3K1 Canada
Tel: (416) 321-1179 Fax: (416) 321-8451

Inmark Industrial Ltd
1A Man Foong Ind. Bldg.,
7 Cheung Lee Street, Chai Wan Hong Kong
Tel: (852) 558-2203 Fax (852) 897-3700

DRUM OUTPUT

3250 dpi, 400 lpi
FILM, PAPER LARGE FORMAT
FAST, EFFICIENT SERVICE
FROM
PC MAC & PS Print Files
Guaranteed Registration
* QMS COLOUR OUTPUT *

Adobe Authorized Imaging Centre
CAMPUS SYSTEMS GROUP
100 Harbord Street Toronto M5S 1G6
416 925-2277

44-voice MIDI files MediaTrix is hoping musicians and game developers will use Audiotrix Pro to its full extent and go into the 44-voice MIDI market.

We tried out all the excellent sample (15 or so) MIDI files supplied with Audiotrix Pro They were all very well composed Among the MIDI files were FIDLING MID TEC NOVOX MID (by Gerard Jones) and EUROMAN MID by Henry Challour, all 44-voice MIDI files.

We have to tell you that these files really do sound amazing Audiotrix Pro has excellent instruments. The music always sounded clear and pleasing to us.

The fact that Audiotrix Pro had full General MIDI compatibility and an MPU-401 interface proved useful when playing games in DOS No game has yet included direct support of the Audiotrix for Sound Effects and Music (even though MediaTrix has made Sierra drivers available on their BBS 819-829-5101).

We tried several games like DOOM (by Id Software) and Raptor (by Apogee) with Audiotrix Pro In both of their configuration programs we were able to select different IRQs and I/O addresses for the MPU-401 (for General MIDI music) and Soundblaster (for effects) Audiotrix Pro s default configuration worked perfectly

Both DOOM and Raptor had MIDI sound tracks that sounded excellent on Audiotrix Pro In DOOM we were also able to hear digital sound effects which had been a problem with an FM Synthesis based Soundblaster compatible card However not every game was as easy to configure for Audiotrix Pro as most of the games were One example is Dune II a game with an excellent MIDI sound track, made by Virgin Games. We entered the game s setup program, and chose Soundblaster (mono) for the sound effects as usual But when we wanted to select the device for playback of background music (we usually select General MIDI) we couldn't find any such option The manual had no solution for this problem

Fortunately the WHATSNEW TXT file helped solve the problem A small program called SETMPU provided the solution. SETMPU can let you change from the standard MPU-401 mode (Audiotrix Pro has a hardware MPU 401 interface) to the Roland MT 32 mode We were able to use this playback device for background music and DUNE II's sound track proved to be very enjoyable

We later found out that our strong appreciation of Audiotrix Pro s General MIDI was shared by experienced musicians MediaTrix sent a new press release accompanied by the "Fat Seal " The Fat Seal certifies that Audiotrix Pro has been tested and is recommended by the "Fat Man " also known as George Sanger, the composer of many games' music tracks, among which are Loom, Wing Commander and The 7th Guest.

Audiotrix Pro was the first PC sound card to receive the Fat Seal The Fat Seal acknowledges that each instrument on the sound card has been tested by Fat Labs for various musical attributes that affect the overall quality of General MIDI playback It also means that Audiotrix Pro has a hardware MPU-401 on the card, resulting in less use of your CPU.

I don t know how much the Fat Seal really means, but it is noteworthy that a small company like MediaTrix was the first to receive the "Fat Seal" for one of its products

The 16-bit Audio Codec

Audiotrix Pro supports 16-bit recording and playback It is based on the same codec that the Microsoft Windows Sound System uses and is therefore compatible with this 16-bit sound card

Audiotrix Pro has built in hardware ADPCM compression With ADPCM compression, you can record wave files at high sampling rates (up to 44 1 kHz) and the files are automatically compressed to a bit more than a quarter of their original size. This means that a file that would usually be 16 MB should be around 4 MB when compressed. Hardware ADPCM compresses instantly (real time) and does not place a large load on the CPU (as software would) Audiotrix Pro's audio codec (made by Crystal) has the same capabilities of the Soundblaster 16's ASP chip (the ASP adds the benefit of ADPCM compression)

The overall quality of Audiotrix Pro is excellent The sound is very clean and clear It is considered one of the better 16-bit codecs on the market

In conclusion, Audiotrix Pro s audio codec is compatible with the Microsoft Windows Sound System and Soundblaster (no Soundblaster Pro or Soundblaster 16 compatibility)

Recording Quality Tests

We used the Business Audio Transport for the recording tests The Business Audio Transport is an OLE Server application that comes with

➤

Do Your Christmas Shopping From Our Catalogue of Over 30,000 Products

Compaq 3 Years Parts & Labour One Year Home Service

Presario 510 CDS 4/270 w/monitor	1995
Presario 633 4/200	1495
Presario 633 CDS 4/200	1799
Presario 660 4/340	1669
Presario 720 4/420	1749
Presario 724 CDS 8/420	2385
Presario 833 CDS 4/270	1865
Presario 850 4/270	1795
Presario 850 CDS 4/340	2395
Presario 866 4/340	2195
Presario 920 CDS 8/420	2149
Presario 920 CDTV	2499
Presario 924 8/420	2199
Presario 924 CDS 8/525	2549

Apple One Year Parts & Labour

LC 475 4/160 w/ColourPlus Display	1549
LC 475 8/250 w/ColourPlus Display	1879
LC 575 8/250 CD300i	2699
LC 630 8/350 CD w/ColourPlus	2699
PowerMac 6100 8/160 w/ClrPls	2769
PowerMac 6100 8/250 CD w/ClrPlus	3349
PowerBook 520 4/160 Mono	2999
PowerBook 520c 4/160 Colour	3899
Personal LaserWriter 300	835

Bonus!
$50 Christmas Cash
(With Purchase of Computer System. See Details at Store)

Bit BY Bit
THE POWER OF INFORMATION AT HOME
416-920-3000
21 GRENVILLE STREET, TORONTO

Hours
9-7 30 Mon-Fri
10-6.00 Sat

* All prices cash discounted. Visa or Mastercard add 3%. System price does not include monitor unless specified. Price subject to change without notice.

Productivity Software*

Microsoft Office 4 2	165
Microsoft Office 4 3 Professional	199
Microsoft Excel 5 0	135
Microsoft Word 6.0	135
Lotus SmartSuite 3.0	165
Lotus 123 Release 5 for Windows	105
Lotus 123 Release 4 for DOS	105
Lotus Ami Pro 3.01 for Windows	109
WordPerfect 5.1+ for DOS	149
WordPerfect 6 0a for Windows	115
WordPerfect 6 0a and Quattro Pro	149
Norton Utilities 8 0	75

*Educational I.D. Required.

TIMESpeed 2 Years Parts & Labour

486 DX2/66 4/420	1299
486 DX2/66 4/420 Multimedia	1499
Pentium 60 4/540	1995
Pentium 90 8/540	2669
Options	
Monitor 14' 28 dp NI Low-Radiation	355
Monitor 15' 28 dp NI Low-Radiation	499
FaxModem 14 4 Internal	145

Audiotrix Pro Using the Business Audio Transport you can embed sounds into certain word processor documents or Spreadsheets By employing OLE (Object Linking and Embedding) the embedded sound will automatically be updated when you edit it with the Business Audio Transport. In short, if you have embedded a sound that has a recording of you saying, "Welcome" and you use the BAT to change it in "Welcome — to my house," the word processor will automatically change the sound to the above

The BAT lets you change sampling rates (anywhere from 4 to 44 1 kHz) from stereo to mono and compression or no compression

We first tested simple recording of speech at an 11 kHz sampling rate in 8-bit mono mode By turning "dither" on in Audiotrix Pro's "Input Mixer" (another utility) We were able to eliminate the hissing sound or static that was apparent while recording on other cards To record 7 7 seconds of sound requires roughly 86k while 8 5 seconds with ADPCM compression took about 47k

The first time we tried recording in 16-bit PCM mono mode (no compression) the system crashed we needed to free up more space Make sure you have at least 20 MB free especially when you are running a hard drive compression program like DoubleSpace since these programs usually estimate the amount of space left on your hard drive. After freeing up more space we were able to record in 16-bit PCM mode

We tried ADPCM (compression mode) with the same settings as before and recorded a 14 second clip from a tape The recording was again very high quality and we did not notice any difference between no-compression and compression except for its size 117k

Bundled Software

Audiotrix Pro includes five third party software titles Dual Module Player (DMP for short) v 2 83 by Otto Chrons Midisoft MusicMagic Midisoft Sound Impressions, SuperJam Jr and Soft Karaoke We have prepared short summaries for each title except for Dual Module Player

Midisoft MusicMagic A very easy to use program that allows you to create your own MIDI files either by input from a MIDI keyboard or your mouse This program allows you to record notes played on your MIDI keyboard and edit them on screen just like sheet music This program does not record the speed beat, dynamics and the length of each note though, since it is not a MIDI sequencer You can change the beat, dynamics and length of each note on-screen MusicMagic allows you to save files in the MIDI format but does not have a print option

The program's on-line help is very extensive and informative It explains the concepts of music and MIDI. There are no hard copy manuals included

Midisoft Sound Impressions. This program uses a Hi Fi set as its interface The interface is very intuitive and easy to use Sound Impressions can play back MID WAV, and audio CDs It also has a convenient mixing panel, just like a real stereo Sound Impression includes an excellent Wave-file Editor that lets you add special effects to wave files, change between sampling rates or convert a wave file from mono to stereo This program has excellent on-line help and is very fun to use

➤

SELECTED SYSTEMS	486DLC-33 w.128KB cache	486DX-33 w.256KB cache	486DX2-66 w.256KB cache	PENTIUM 66 w.256KB cache	PENTIUM 90 w.512KB cache
BUS	ISA	3 VESA LBus slots + Pentium socket	3 VESA LBus slots + Pentium socket	3 PCI LBus slots +5 ISA slots	3 PCI LBus slots & VESA / ISA slots
MEMORY	4MB, max 32MB	4MB, max 32MB	4MB max 32MB	8MB, max 192MB	8MB max 192MB
IDE HARD DRIVE	210MB w cache	340MB with cache	340MB with cache	340MB with cache	540MB with cache
N.I. 14" SVGA MONITOR 0.28	$1199	$1449	$1599	$2399	$2699

[illegible] 14" SVGA .28 dot pitch non interlaced monitor, 1MB SVGA video card, 101 enhanced keyboard mouse, [illegible] 1 44MB 3 5" floppy disk drive mini tower case, 230W power supply, 2 serial, 1 parallel and 1 game ports [illegible]

Rent

Computers

Notebooks and 486, 386, 286 systems with the monitor and hard drive capacity of your choice

Printers

Dot-matrix printers and excellent Laser printers for top quality documents

Systems upgrade: XT, 288, 386--->386, 486. Memory and Hard drives upgrade.

Local Area Network Installations, Programming, Repairs

Compumemories

TEL: 416 232 2777
FAX: 416 232 2401

3080 Bloor Street West
Toronto Ontario M8X 1C8
North-East corner of Bloor and Montgomery Rd two blocks west of Royal York Rd Open 10 19 Saturday 10 18

MOTHERBOARDS

Dual Pentium 90 256KB, PCI	1595
Pentium 90 256KB, PCI & VLB	1095
Pentium 66 256KB, PCI & VLB	1149
Pentium 60 256KB, PCI & VLB	899
486DX2-66 256KB, PCI & VL-Bus	586
486DX2-66 256KB cache, VL-Bus	445
486DX-33 & 40 256KB ca, VL-Bus	386
486DLC-33 Texas In 128KB cache	179
386DX-40 128KB cache	160

VIDEO CARDS

ATI ULTRA PLUS 2MB	235
ATI ULTRA PRO 2MB	285
ATI ULTRA VESA LBus 2MB	298
ATI Wonder VESA LBus 1MB	159
ATI ULTRA PLUS PCI 2MB	285
ATI Turbo 64bit 2MB PCI or VLB	350
ATI Turbo 64bit 4MB PCI or VLB	898
ATI Video-IT	445
S3 Vesa Local Bus 1MB SVGA	138
S3 ISA SVGA 1MB V RAM	118
Diamond Viper 2MB VLB	470
Diamond Stealth64 2MB VLB/PCI	465
Diamond Stealth64 4MB VLB/PCI	889
Hercules Dynamite Pro 2MB VLB	298
CIRRUS LOGIC 1MB VESA LBus	128
TRIDENT 1MB VESA LBus	1[illegible]

HD CONTROLLERS

IDE VESA LBus 2 HDD/FDD	49
ISA Enhanced IDE 8 I/O w 16550	78
IDE VESA LBus HDD/FDD 16550	70
IDE VESA LBus 4 HDD/FDD	70
Adaptec 1522A SCSI HDD/FDD	188
Adaptec 1540 SCSI HDD	245
Adaptec 2840 PCI SCSI kit	448
Adaptec VESA LBus SCSI OEM	185
PC IDE HDD FDD & IO	55

HARD DRIVES

WESTERN DIGITAL IDE

340MB (13ms/128KB cache)	285
425MB (13ms/128KB cache)	285
540MB (10ms/128KB cache)	276
730MB (10ms/128KB cache)(IDE)	488
1.08GB (10ms/128KB cache)(IDE)	898

QUANTUM IDE

210MB (12ms/128kb cache)	265
270MB (12ms/128KB cache)	278
360MB (12ms/128KB cache)	288
540MB (12ms/128KB cache)	388
730MB (12ms/128KB cache)	485

MAXTOR IDE

345MB (14ms/64KB cache)	278
420MB (11ms/256KB cache)	288
540MB (11ms/256KB cache)	375

SEAGATE IDE

340MB 3351A (12ms/128KB c)	285
421MB 3491A (12ms/128KB c)	218
528MB 3655A (12ms/128KB c)	378

CONNER IDE

420MB (12ms/64KB cache)	305
540MB (12ms/128KB cache)	395

SEAGATE SCSI-2

345MB (13ms/256KB cache)	488
452MB (12ms/256KB cache)	485
545MB (12ms/256KB cache)	650
1 0GB (9ms/256KB cache)	895
1 7GB (9ms/256KB cache)	1495
2 1GB (9ms/256KB cache)	1889

IBM IDE

270MB (12ms/128 KB cache)	245
365MB (12ms/128KB cache)	219
540MB (12ms/128 KB cache)	365
720MB (12ms/256 KB cache)	495

IBM SCSI

1GB Spitfire 8 9ms SCSI	195

QUANTUM SCSI

1.08GB (10ms/512 KB cache)	845

TAPE BACKUPS

Conner 250MB internal	225
Conner 250MB external (parallel)	445
Conner 420MB internal	275
Conner 850MB internal	345
Conner 850MB external (parallel)	650
Colorado 250MB internal	225
Colorado 250MB Trakker ext	428
Colorado 350MB internal	295
Colorado 350MB Trakker ext	498
Colorado 700MB internal	405
Colorado 700MB Trakker ext	725

CD ROM for Notebooks &

Computers [illegible] interface Our unique design CD Drives allow to connect an external CD Drive to the parallel Computer port [illegible] notebook or desktop without using [illegible]

Instant Technology CD 2x speed	356

CD ROMS

Teac 4xSpeed	5[illegible]
Panasonic CR562 double speed	199
Plextor Quad speed	618
SONY CDU33A double speed	199
SONY double speed SCSI	288
MITSUMI FX01 double speed	199
SoundBlaster Discovery Kit	349
SoundBlaster Schoolhouse	388
NEC double speed CD drive	199
NEC Double Speed & Encarta94	250
Toshiba SCSI CD 4101	385

MONITORS

Samsung 14" SVGA n I 0.28	375
TTX 15" SVGA n I 0.28	485
TTX 17" SVGA n I 0.26	899
Sony 15" SVGA n I 0.25	828
Sony 17" SVGA n I 0.26	1025

LASER PRINTERS

HEWLETT PACKARD

Hewlett Packard 4L	930
Hewlett Packard 4P	1345
Lexmark WinWriter 200	645
Lexmark other models	call

RAVEN

RAVEN LP410	845
1MB Memory upgrade for LP410	60

Toner Cartridges for most printers. Memory modules for most printers!

DOT MATRIX PRINTERS

PANASONIC

KX-P2123 24pin/color option	298

RAVEN

RP 2485 24pin	228
RP 2486 28pin/color option	288

CITIZEN

GSX 230 24pin/color option	295

EPSON

Epson LQ 570+	345

INK JET PRINTERS

Hewlett Packard DESKJET 540	478
Color upgrade for HP540	65
Hewlett Packard DESKJET 560C	615
CANON BJ200E	366
Cannon BJ4000	188
Epson Stylus color	198
Epson Stylus 800ip	318
Lexmark ExecJet IIC	468
Fargo Primera color printer	5[illegible]

BUY/SELL Used Software

We buy for consignment used and sell used

BORLAND OFFICE 2.0 UPG	199
EIGHT-IN-ONE	20
FASTBACK PLUS	25
GRAMMATIK	25
INSTANT ARTIST	26
LANTASTIC 4	40
LEARN TO USE YOUR PC	16
MS DOS 6.0 UPGRADE	30
MY MAIL LIST	[illegible]
WORLD ATLAS	20

SOFTWARE

ACCESS 1.1 (full version)	75
ACCESS 2.0 upgrade	158
Act 2.0 for Windows	185
CadKey Light	185
DOS 6 22 full version	8[illegible]
DOS 6 2 step up upgrade	18
DOOM (CD)	14
Excel 4.0 Win (full Version)	89
EXCEL 5.0 Win upgrade	148
FastBack for Dos or Win	99
FoxPro 2.0 for Dos full Ver	59
FoxPro 2.5 for Windows full Ver	89
FoxPro 2.5 for Windows full Ver	128
Harvard Graphics upgrade	100
Lotus 123 Win V5.0 upgrade New	135
Lotus AMI PRO upgr	119
Multimedia Office 4.3	185
MS Visual Basic STD 3.0	99
MS Visual C++ 1 0 (full version)	150
Norton Desktop for DOS or Win	126
Norton Backup for DOS or Win	99
Norton Utilities DOS & Win V8.0	130
Norton Antivirus	88
OFFICE 4 2 upgrade	338
OFFICE Pro 4 3 full ver CD only	359
OS/2 for Windows 2.1	45
OS/2 V 2 1	69
OS/2 V 2 0 Warp (full)	128
PARADOX 2.0 Win	139
PC TOOLS	118
Procomm Plus NEW VERSION	146
Quattro Pro Ver 5 0 Win upgrade	88
QuickBooks Canadian Win 4 0 New	89
WINDOWS 3 1 full version	85
Windows 3 11upgrade	59
Windows 3 11full version	85
WinFax Pro Win. Ver 4 0	89
WORD 2.0 Win (full version)	99
WORD 6.0 Win upgrade	148
Word Perfect 6.0 Dos/Win upgr	125
WORKS DOS or Windows	16

CD Specials

7th Guest (CD)	50
Aircraft Encyclopedia	35
American Business Phonebook'94	19
Bookshelf 94 CD (Microsoft)	88
Canada Phone on CD	48
CIA World Factbook (3 Yr Edition)	21
Compton's Interactive Encyc 1994	23
Corel Artshow 4	26
Dinosaur Safari	31
Encarta 94	65
F 15 Strike Eagle III	23
F111A & F 15 II Pak	32
F117A Stealth Fighter	29
F14 Tomcat+F18 Stealth+Jetfighter	25
Free Phone (800) Directory	28
Grolier's Encyclopedia Ver 6.0	32
Grolier's Prehistoria	27
Home And Office Platinum	16
Indiana Jones&The Fate of Atlantis	21
Kings Quest VI	35
Mavis Beacon Teaches Typing 2.0	23
Mayo Family Health Cure	21
Microsoft Cinemania '94	38
Playing With Language/English	27
Playing With Language/French	27
Playing With Language/German	27
Playing With Language/Japanese	27
Playing With Language/Spanish	27
SimCity 2000 Enhanced	67
Sleeping Beauty	23
Space Quest IV Roger Wilco	21
Star Wars Chess	27

FAX & MODEM

16550 Serial card	25
Fax/Phone Hand-A-Call switch	88
ATI 14 4 ETC-E F/M external	185
ATI 14 4 ETC-I F/M internal	148
Boca 14 4 Fax/modem voice	205
Boca 28.8 Fax/modem	226
Cardinal 14.400 internal	109
GVC 14.4 Fax/Modem internal	125
GVC 14.4 Fax/Modem external	149
GVC 28.8 Fax/Modem internal	259
GVC 28.8 Fax/Modem external	219
Intel 14.4 fax/modem external	318
INTEL SatisFAXtion 400 internal	378
US ROBOTICS 14 4 F/M external	199
US ROBOTICS 14 4 F/M internal	189
US ROBOTICS 28 8 F/M internal	289
Zoltrix 28 8 Fax/modem	189
Zoltrix 14 4 Fax/modem/voice	149
ZOLTRIX 14 4 F/M internal	95
ZOLTRIX 9600/2400 F/M internal	35

AUDIO CARDS

Gravis UltraSound Max	255
Sound Blaster ASP AWE 32	285
Sound Blaster ASP 16 CD	265
Sound Blaster 16	155
Sound Blaster Pro Deluxe	89
Turtle Beach Maui Wavetable upg	208
Turtle Beach Tahiti	305
Turtle Beach Monterey	495
Turtle Beach Quad Studio	565
Wave Blaster	239
Zoltrix (Sound Blaster comp.)	85
Spectrum Pro Audio 16	1[illegible]

SCANERS

Logitek ScanMan 256 w OCR	1[illegible]
Hewlet Packard II CX	1295
Hewlet Packard II P	645
Microtek ScanMaker II	155
Microtek ScanMaker III	3495

MEMORY UPGRADE &...

4MB SIMM module 70ns	205
4MB Memory upgrade for HP4/4P	248
1MB SIMM module	65
1MB chip	8
Cache Memory 1MB (128KB by 8)	32
HP IIP/IID/IIP/IIIP 1/2/4MB	1[illegible] 85/295
8MB Module ThinkPad 700-720C	490
9600 Modem ThinkPad 700 720C	168

Please fax inquiries (232 2401) about memory for printers, notebooks & systems Apple AST AT&T Bondwell Brother Canon Compaq DEC Dell Epson Fujitsu Hewlett Packard IBM NEC NCR Okidata Olivetti Packard Bell Panasonic Sharp Star TEC TI Toshiba & others

Toner cartridge for most Laserprinters	
387DX MathCo-all speeds	15
Microsoft Natural Keyboard	138
French Keyboard	20
Intel Ethernet network card	188
Ethernet 16 bit network card	98
Syquest 44MB/88MB cartridge	85/125

Selection of cables & switch boxes

CP 11/94

All prices are already cash discounted. Availability and pricing subject to change without notice.

THE WORLD'S SMALLEST WONDER

- ⇨ Portable Hard Disk Drive (PHd) in various capacities
- ⇨ Fast system back-up saves time
- ⇨ Protect your data. Remove and lock-up your PHd
- ⇨ Carry your software and data and plug into any DOS or OS/2 PC
- ⇨ Add hard disk capacity to your notebook, portable or desktop PC
- ⇨ Secure, easy way to carry, send or transfer data between offices or PCs
- ⇨ Easy external installation in 2-3 minutes via the PC parallel port
- ⇨ Built-in flow-through parallel port still allows use of printer
- ⇨ Includes cables, carry pouch, software and 1 year warranty

AVAILABLE AT THE FOLLOWING LOCATIONS.

ATKINSON DATA SYSTEMS	416-283-3619	DATA FIRST COMPUTER	416-412-0547
SABLE COMPUTER INC	416-867-8193	SYSTEMLOGIC INC	416-789-2390
TRANS-TUTOR	416-486-5920	LOGICAL DIRECTIONS	905-731-6497
BRANTFORD-MCOMPUTER	519-752-7730	WATERLOO-MOBILITY WORKS	519-886-3106

All products mentioned are trademarks or registered trademarks of their respective corporations
EXCLUSIVE CANADIAN DISTRIBUTOR-URTEC DATALINK TEL (905) 415-0146 FAX (905) 475-9840

ALPHA COMPUTER CONNECTIONS
2050 Steeles Ave., W. Unit 2
FAX : (905) 738-1570
TEL : (905) 738-0744

TWO YEARS LABOUR & PARTS DEPOT WARRANTY ON SYSTEMS

ALPHA EXECUTIVE SERIES

Intel 486DX2 66	AMD 486DX2 80	Intel 486DX 100
$1899	$1989	$2329

SYSTEMS INCLUDES :
- 8Meg 72 pins Simm 70ns, 256K cache
- Acer/Gygabyte VLB Main Board, Green, ZIF
- Magitronic 15" 1280 x 1024 0.28dp XGA Monitor, Green, Pincushioning, Digital Control, MPRII, Degaussing...
- ATI Mach32 VLB Wonder Graphics w/1Meg(Max. 2Meg)
- VLB IDE Controller I/O Card
- 1.44MB Floppy Drive
- Maxtor 540MB IDE HDD
- Honeywell 101 Keyboard
- CD Midi Tower Case 250watt Power Supply
- M.S. J - Mouse & pad

SYSTEMS INCLUDES :
- 8MB 72pins Simm Memory, 70ns
- PCI Main Board w/256K Cache, ZIF, Green, Intel chipset, 64 - bits
- Magitronic 15" 1280 x 1024 0.28dp XGA Mon - Interlaced, Green, Pincushioning, Degaussing, Digital Control, MPRII
- ATI Mach64 PCI Windows Accelerators w/2Meg DRam
- PCI IDE Controller w/16550 Ultra Fast I/O
- 1.44MB Floppy Drive
- Western Digital 700MB IDE Hard Drive, 128K Cache, 12ms
- Delux CD Midi Tower Case with 250watt Power Supply
- Keytronic 101 Keyboard
- Microsoft J - Mouse w/Pad

Pentium 60	Pentium 66	Pentium 90
$2789	$2899	$3249

Upgrade :

ATI Mach64 Win Turbo w/2MB V-Ram	..add.. $130
Mag DX17F 17" XGA Monitor	..add. $360
Viewsonic 17E 17" XGA Monitor	..add. $720
Western Digital 1.08GB IDE HDD	..add.. $510

Repair & Service
Systems Upgrade
Networking

ALPHA PENTIUM SERIES

Alpha Power Series
- 4Meg Simm 70ns, 128K cache
- VLB Main Board, Green, ZIF
- 14" 1024 x 768 0.28dp SVGA NI Monitor
- Cirrus Logic VLB Video Adapter w/1Meg
- VLB IDE I/O Card w/1p, 2s & 1Game Port
- 1.44MB Floppy Drive
- 101 Enhanced Keyboard, Mini Twr Case
- Free Mouse & pad

Intel 486SX-33	Intel 486DX2-66
$1239	$1399

Special
14.4 Int. Fax Modem WinFax, #6550 $93
Colorado 250MB Int Tape Backup $199

Multimedia Kit
- Panasonic CR 562B Dual Speed CD Rom
- Creative Lab Sound Blaster 16
- CP-55 Stereo Speaker

$295

* All Price are Cash Discounted and subjected to change without Notice

multi*media*

SuperJam Junior simulates a real band. It is a feature rich and complex program. You can choose a background beat in different styles of music (e.g., Rock, Jazz, Reggae) and then compose music for different members of your band that will be played along with the style. The program is easy to use for people who don't know much about music, because it makes sure the notes played along with a certain patter in a certain scale are the right ones.

A devoted user can easily learn this program in a few days as it includes on-line help that guides you through every feature of the program.

SuperJam Junior cannot save files in the MIDI format but there is a coupon included that lets you upgrade to the 'Pro' version for $50.

Soft Karaoke from Tune 1000 Corp. in Ste Foy PQ (not to be confused with PC-Karaoke) is a program that mimics the 'traditional' Karaoke from Japan. It lets you sing along with the numerous popular hits (I won't mention the oldies) and you can even record your voice. The songs that come with the program are in a special format and include the lyrics of the song. You can also open conventional MIDI files without any text and sing along to the tune of them. The songs sound especially nice with a card equipped with Wavetable Synthesis, like Audiotrix Pro.

Expansion Modules
There are several expansion modules that you can add to Audiotrix Pro. You can add an effects processor, a RAM daughterboard, a CD-ROM interface and a Karaoke Processor.

You cannot add all of the daughterboards to the card, since the effects and Karaoke processor use the same slot.

Effects Processor The Effects Processor is a DSP that lets you add effects like reverb, delay, echo, auto pan and 3D Sound to General MIDI. You can select an effect in its own Windows Control Panel applet and then apply this effect in Windows or even in a DOS game when you exit Windows. MediaTrix is still working on drivers for 3d and surround sound (built into Audiotrix Pro). The Effects Processor is available for $80 from MediaTrix.

SRAM Daughterboard You can add an SRAM expansion board (up to 2 MB) to Audiotrix Pro to store your own pre recorded samples in when you are doing professinnal MIDI work. The daughterboard is available for $105.

CD ROM Interface You can choose between a SCSI, Multi-CD (Sony, Panasonic, Mitsumi) and Philips CD ROM interface. SCSI and Multi CD interfaces are $40 and the Philips interface is $45.

Karaoke Processor The Kareoke processor is still in development as MediaTrix is still working on the drivers. We were unable to obtain pricing and exact functions.

Summary Impressions
We don't know if this card would be the top choice as a professional musician, but it would definitely be the first on our list if we were gamers or hobby musicians. Both of those types of users require Soundblaster compatibility and a quality 16-bit Audio codec.

One concern that we have is the absence of hardware SB-Pro (stereo) compatibility. This is a disadvantage, because users with games or other programs that do not support the Windows Sound System or General MIDI will have to put up with mono sound. Fortunately this does not apply to Windows programs, because they will all be using the Windows Sound System driver.

You will soon see the entertainment market fully support General MIDI and many CD-ROM based games already have 16 bit sound. Why invest in old technology when you can get Wavetable Synthesis and compatibility, now? You will soon see the market for cards like Audiotrix Pro grow. There will be more cards to choose from and the prices will be lower. Definitely do consider Audiotrix Pro, as it can match and beat many of its competitors features.

Audiotrix Pro has a great, clear sounding 16-bit audio codec and its General MIDI capabilities are excellent. Its capabilities exceed that of the SB-16 ASP besides the fact that the SB-16 has one of the noisier codecs on the market. The expansion modules, especially the effects processor (a DSP) are very worthwhile additions.

Audiotrix Pro is available directly from MediaTrix for $395, and should be available soon, in retail channels at approximately $360. A different version of Audiotrix Pro will also be released, with no MIDI keyboard support, for about $260. ☐

Contact MediaTrix Peripherals, 819-829-TRIX or 1 800-820-TRIX

The authors are Grade 9 students living in North York, ON. Their newsletter, *Technowizards*, has been put on hold due to a backlog of homework.

Tired of High Phone Bills?
Save up to $1300 on phone bills each year!
Share 3 devices on one line with separate phone numbers.

Sale Price $20 OFF!

IDENTA-SWITCH
Automatic Intelligent Telephone Line Switch
Made in Aurora, Ontario, CANADA

Hundreds of uses:
Home Office
Fax Machine
Computer Modem
Children's Phone
Easy to Install

Only $149.95!
Sale Price $129.95! With this Ad

14 Day Trial Period
5 Year Warranty

CRESTLINE TECHNOLOGIES INC.
Contact (905) 727-7978

Canada's
NOTEBOOK
SPECIALISTS

THE NOTEBOOK STORE

Canada's
NOTEBOOK
SUPER CENTRE

LOWEST PRICE

You always get the lowest available price on The Notebook Stores Systems. We guarantee it or we'll refund the difference
* (Plus 5%)

SAMEDAY EXPRESS

Order any of our standard systems and we will have it ready for pick up within 4 hours, or order by 6:00 P.M. and we will have it to you by 10a.m. the following day.

CUSTOM CONFIGURATIONS

Eliminate Installation hassles by letting The Notebook Store install your extra memory, modems and Software. Configuration is Free.

REPAIR DEPOT

We can repair all brands of notebooks for all problems including Screens, Floppy Drives, Hard drives, Ports, Power and all other problems requiring repairs.

Zenith

Intel 486 With 2 PCMCIA

$1399

features

Intel 486 25 4 Megabytes Ram
120 Megabyte hard Drive 2 PCMCIA Trackball
Dos/Windows (170 Meg Drive Add $100)

Product Code	List Price	Our Price
[illegible]	$2699	$1399

AST (oem)

486 DX 2 PCMCIA

$1799

features

486 DX Processor 4 Megabytes Ram
200 MB Hdd Dos Dos Windows
Trackball 2 PCMCIA (1yr Warranty)

Product Code	List Price	Our Price
[illegible]	$2499	$1799

TOSHIBA

486-33 200 Hdd PCMCIA

$1999

features

486 33 Processor/4 Megabytes Ram
Microsoft Trackball PCMCIA
200 Megabyte hard Drive

Product Code	List Price	Our Price
[illegible]	$2699	$1999

AST

486 33 200 Hdd

$1899

features

486-33 Processor 4 Megabytes Ram
Local Bus Video PCMCIA
200 Meg HD Dos/Windows

Product Code	List Price	Our Price
BRAVCT	$2679	$1899

COMPAQ

486 DX2/40 *Colour*

$3189

features

Intel 486 dx2/40 4 Megabytes Ram
250 Megabyte Hard Drive
2 PCMCIA Rem Hdd. 6.5 Pounds

Product Code	List Price	Our Price
[illegible]	$4299	$3189

Panasonic

Multi Media Notebook

$6999

features

486DX2 50 Processor 8 Megabytes Ram
260 Hard Drive 10.4 Active Matrix Colour
Internal Standard CD Rom and 16 Bit Sound

Product Code	List Price	Our Price
[illegible]	$8699	$6999

NOTEBOOKS

TOSHIBA - LOWER Prices			S.R.P	Only
Toshiba 1910	486 sx 33	120	$2699	$1899
Toshiba 1910	486 sx 33	212	$2999	$1999
Toshiba 1910CS	486 sx 33	212	$3999	$2699
Toshiba 1960CS	486 dx2 50	212	$4299	$3311
Toshiba 1960CT	486 dx2 50	320	$5289	$4519
Toshiba 2400CS	486 dx2 50	250	$5299	$4161
Toshiba 3600CT	486 dx2 50	250	$7499	$4819
Toshiba 4700CT	486 dx2 50	320	$8099	$6586
Toshiba 4800CT	486 dx4 75	340	$9399	$6988

PANASONIC - CD NOTE		S.R.P	Only
Panasonic 486 DX2 50 Active	200	$6499	$5299
Panasonic 486 DX4 75 Active	260	$7995	$6899

IBM THINKPAD		
Thinkpad 360 360cs 360c 755cs	From	$2699

AST ASCENTIA - Low Prices	S.R.P	Only
ASCENTIA 800n 486 33 250 Passive	$3699	$2899
ASCENTIA 800n 486 50 250 Passive	$3999	$3399
ASCENTIA 900n 486-50 4/340 Active	$4899	$3399
ASCENTIA 900n 486-75 8/340 Passive	$5799	$4699
ASCENTIA 900n 486 75 8/510 Active	$8950	$7299
ASCENTIA 900n 486 50 8/340 Active	$6799	$5999

COMPAQ CANADA			S.R.P	Only
Compaq	aero	80	$2199	$1499
Compaq	Contura 400	40 dx	$3599	$3189
Compaq	Contura 400	40 dx	$4899	$4187
Compaq	LTE Elite	40c	$5199	$4499
Compaq	LTE Elite	40cx	$6299	$5495
Compaq	LTE Elite	50cx	$8399	$6999
Compaq	LTE Elite	4 75 cx	$8799	$7599

NEC TECHNOLOGIES			S.R.P	Only
UltraLite Versa S	486 sx 33	250	$3799	$2999
UltraLite Versa V	486 dx2 50	340	$7305	$5699
UltraLite Versa S	486 dx2 50	250	$6185	$5199
UltraLite Versa V	486 dx4 75	340	$8375	$6499

486 DX 2/66 250HD COLOUR

FEATURE 486 DX/66 COLOUR **$2999**

IMPULSE NOTEBOOKS			S.R.P	Only
600 ELITE SERIES NOTEBOOK UPGRADABLE [2 PCMCIA, Local Bus NiMh Trackball Sound]				
Impulse PL815	486 sx/33	209	$2799	$2197
Impulse PL815	486 sx/33c	209	$3905	$3099
Impulse PL825	486 dx4/75	340	$3699	$2856
Impulse PL825	486 dx2/100	340	$3999	$3032

IF YOU FIND A BETTER PRICE CALL THE NOTEBOOK STORE BEFORE YOU BUY!

NOTEBOOK UPGRADE CENTRE

NEW REPAIR DEPOT

MEMORY **PCMCIA**

Here are just a few modules available. All are professionally installed at no extra charge

TOSHIBA
NEC
IBM
AST
ZENITH
TI
COMPAQ
IMPULSE

Options
FAX\MODEMS
NETWORK
HARD DRIVES
MEMORY
BATTERIES
SOUND
EXTRA SERIAL
GPA's

We Make Buying Easy

ON THE SPOT

FINANCING LEASING

VISA / MASTERCARD / AMEX

FREE ALARM WITH EVERY NOTEBOOK PURCHASE

PORTABLE PRINTERS

All of these printers can be equipped with a battery and used from your remote location.

Canon BJ 10 SX
HP Portable Printer
Citizen PN48
Citizen Notebook Printer II
Panasonic NB Laser

from $279

* ALL CORPORATE AND GOVERNMENT PURCHASE ORDERS ARE ACCEPTED ** PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE
*** ALL PRICES ARE CASH AND CHEQUE DISCOUNTED ALREADY *parts must be in stock and the same item. 5% of the difference

4495 CHESSWOOD DRIVE

2 lights W. of Dufferin & 1 Street South of Finch
OR
Take the 401 to Allen N. at 2nd stop light
(Sheppard) Make left, & 2nd light
make a right (Chesswood) to 4495
(WATCH FOR OUR NEW LOCATIONS OPENING SOON)

(416)630-5681

No One Sells for less and gives better service

How Multimedia Computers Work

BY ROSS MACDONALD

Product: PC/Computing How Multimedia Computers Work on CD-ROM
From: The Software Toolworks
80 Leveroni Court Novato, CA 94949
(415) 883-3000
Price: US$35 95

Despite the popular impression among computer cognizzenti, there really isn't much out there for the totally technophobic virgin. There are those insidious "For Dummies" books, of course, and numerous third party instruction manuals. But even if some of that stuff proves actually useful they virtually all concentrate on explaining the complexities of software, exiling the hardware-ignorant to fend for themselves in what has become an increasingly hostile jungle

That, apparently, is the problem that Software Toolworks set out to address with PC/Computing. How Multimedia Computers Work, a CD ROM created around PC/Computing's book of the same name

Familiar to many an experienced CD-ROMer as the producers of a marginal encyclopedia that's bundled free with just about every CD-ROM drive Software Toolworks has done a considerably better job with this disk which sports some uncharacteristically sophisticated features.

However any sophistication brought to bear on this disk is primarily focused on the production values, not, alas, the actual content, which can only be generously described as puerile

A rundown of the disk's features is deceptively appealing in offering (and I quote)

- more than 50 incredibly detailed, 3 D computer parts with animation narration fully orchestrated music and sound effects,
- 8 different computer tours, from "Booting Up" to "How a Program Works",
- a 500 word glossary of computer terms, plus over 500 Windows tips,
- a free demo of Ziff-Davis hot new on-line service, Interchange,
- face-to-face video interviews with four computer experts and
- over 70 minutes of audio and original music.

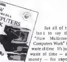
And all of that is there as promised. Animation sequences illustrate everything from what a "bus" is to how a monitor works and the "computer tours" use those same cartoons in sequence to explain entire computing processes The glossary is useful as are the Windows tips and it s all strung together by jazzy music and two of those professional smile-meisters familiar to any insomniac forced to watch infommercials at 3 a m.

The problem, however is that all of these features are so simplistically presented that you have to be absolutely, totally 100 percent disconnected from the past 20 years of electronic development in order to glean anything useful out of them Just as a random example the narrative that accompanies the animated explanation of sound cards in the section called "The Back of the Computer" goes exactly like this.

"A sound card has several special connectors One is there to send signals to external speakers. A different plug receives signals from a microphone and another can receive signals from an external sound source such as a CD player Now, some sound cards also have a small knob to adjust the volume Still others may have an extra connector for a joystick which can also be used as a MIDI port."

That's it Literally Nothing else And I should mention that this is preceded by our "special guest star" Zip Data — an annoying little cartoon electron with an equally annoying face — singing a little song He also jumps into the monitor if you choose "monitor" or jumps on the keys if you choose "keyboard" or

And nobody should be surprised that the "Face-to-Face interviews with four computer experts" are actually video taped answers to four basic questions from each of four Ziff-Davis writers and editors (the skinny is that Ziff-Davis Press puts out *PC/Computing* magazine wink wink).



But all of this isn't to say that "How Multimedia Computers Work" is a waste of time It's just a waste of time — and money — for anyone who already has even the most basic facility with computer hardware and terminology

Take this test.

Someone who up till now had been a good friend walks up to you at a party and says. "I just bought a 486 DX-66 with 8 Megs of RAM and a one Meg SVGA card! Neat huh!?!"

If your first inclination is to say "Wow! Does it have a 350 Meg hard drive?", you don't need this disk.

If, however, you can only stagger back and say "Huh? Got any games on it?" you do need this disk (and a strong cup of coffee)

Now despite what the hordes of my loyal readers might think, I am most definitely NOT a computer expert I could better be characterized as an adequately informed consumer But I couldn t learn much from "How Multimedia Computers Work" despite vast expanses of ignorance in my understanding of the technology My grandmother on the other hand, could benefit greatly from this disk. once she s finally mastered the technical intricacies of her new coffee maker ❑

intel CONNER GENICOM HEWLETT PACKARD IBM NEC Microsoft
MITSUBISHI Canon MAG FUJITSU Panasonic HEWLETT PACKARD

Visit our HighTech Showroom

TTI SYSTEMS
486 DX2/66 $1395
Intel Pentium $1995
High Quality Components
* 4 Meg 72 Pin RAM
* 405 Meg HD
* 1 44 Floppy Drive
* Vesa SVGA
* Vesa Super I/O
* Honeywell Kbd
* SVGA 28 NI Overscan Monitor
Upgrades for DX4 & P90 Call

Best Price On IBM, HP & Canon InkJet & Laser Printers

Multimedia 486DX2/66
High Quality Components
* 4 Meg 72 Pin RAM
* 540 Meg HD
* 1 44 Floppy Drive
* Vesa SVGA
* Vesa Super I/O
* Honeywell Kbd
* SVGA .28 NI Overscan Monitor
* Sony Double Speed CD ROM
* Sound Blaster 16 bit Card
* 8 TOP CD Titles
$1795

Best Price, Best Quality, Best Service, Best Value, 10 Years In Business

Double Speed Sony CD $159

Service Upgrades & Repair Of most Name brands & Compatibles

Networks Design & Installation Call us for dependable services

Laser printer From $599 Limited Quantities

Government and Corporate P.O.'S, and Dealer inquiries welcome

TTi TTI Computers & Business Equipment
Southcreek Business Park, 3045 Southcreek Rd
Units #23 & 25 Mississauge
(905) 238-1238 Fax: 238-0235

Microsoft Office

WORD EXCEL MAIL OFFICE

THERE'S NO

$299 99

adaptec

AHA1540 $249

AHA2840 $319

$399

$489

IBM Value Point

486SX 25MHz $1299

486DX2 66MHz $1999

CONNER

THERE'S NO

ARCHIVE 250 MB TAPE BACKUP $169 99

20 MB $249

ARCHIVE Python

BELOW DEALER'S COST

2 GB DAT

$1199 99

BIG BLUE DREAM COME TRUE

486SX 33MHz $1099

486DX2 66MHz $1499

Maxoptix

REWRITABLE OPTICAL

$1499 99

IBM LexMark ExecJet IIc

$399 99

$499 99

PostScript Laser

$899

HARD DRIVES

This Month's Special

FUJITSU

520 MB $309

540 MB $339

420 MB $299

340 MB $249

1.05 GB

TRINITRON MONITORS

SONY

$549

$1199

$699

$1599

$999 99

PC

1.05 GB IBM

$849 99

BARRACUDA

by SEAGATE

2 GB SCSI-2

$1999 99

ATI

GRAPHICS WONDER

$159

$219

GRAPHICS PRO TURBO $399

GRAPHICS XPRESSION $299

STEALTH 64

CREATIVE

CREATIVE LABS INC

DISCOVERY CD16

$349 99

$699 99

Sound Blaster 16 $119

$189

$159

$229

MEDIA VISION

FUSION CD 16

>$300 worth of CD-titles

w/ 1X PHILIPS CD-ROM DRIVE

$199 99

w/ 2X SONY CD-ROM DRIVE

$339 99

MEDIA VISION

2X SCSI CD-ROM

MULTIMEDIA KIT

COMPLETE PACKAGE

$299 99

MEDIA VISION

$139 99

XXXX RATED

This Month's Special

4X 4X 4X 4X 4X 4X

THE ULTIMATE QUAD SPIN CD-ROM DRIVE!!!!

FOR THE ELITE

TOSHIBA

XM-3501

INCREDIBLE 120 msec!!!

600 KB /sec • SCSI-II

$469 99

EXTERNAL $619 99

THE FUTURE OF 2X CD-ROM DRIVES

TEAC

SuperQuad 4X

QUAD SPIN ON A SHOESTRING

WORLD PREMIERE!!!

$369 99

NEC MultiSpin 3Xi

GREAT FOR MAC & PC

$399 99

EXTERNAL $549

NEC MultiSpin 2X

CDR-84-1

SCSI-2

GREAT FOR MAC &

$249 99

$399

YAMAHA

The ultimate in Multimedia Sound

ALTEC LANSING

Speaker System w/Subwoofer

ACS-3

$139

$299

$299

WILD AND CRAZY SATURDAYS

SOUND BLASTER 16 $99 99

$199

CREATIVE

SAT DEC 3 VERY MAD MAD CD ROM MADNESS

SONY CDU 33A

Panasonic $149

SONY CDU-55E

$169

PC FACTORY

TORONTO

WATERLOO

VIDEO

AUDIO

OPTIMIZED

$1199 99

FUJITSU

WIDE/FAST SCSI-3

AHA2940W

$399

$2299

60 MHz PENTIUM

$1999

MICRONICS

faastest 90 MHz PENTIUM on planet earth! Fast Wide SCSI-3

Microsoft, Office, Word, Excel, Mail, PowerPoint, Adaptec, TEAC, Creative Labs, Conner, Archive, IBM, LexMark, Toshiba, NEC, Sony, Fujitsu, Python, Digital, MediaVision, Maxoptix, Barracuda, Seagate, Tandem, ATI, Mag, Diamond, Stealth, NEC, Yamaha, Sound Blaster, Philips, Panasonic, Pentium, Micronics, and all other brand names or manufacturers' names in this advertisement are the property of the respective manufacturers and/or copyright holders.

Top Utilities for the Mac

BY GRAEME BENNETT

Now Utilities
($129, Now Software) See review, elsewhere this issue.

RAM Doubler
($99, Connectix Corp.) If you are running out of memory — and who isn't? — this program will help. In our opinion, everyone with a Mac IIx or better should get this program — it doubles the amount of available RAM while barely slowing the system down at all. Tech support is excellent and free via a toll-free call.

The company recently released a Power Mac compatible version, although we have noticed that some programs, such as Virtual Reality Laboratories' VistaPro, aren't compatible with RAM Doubler if — and only if — the File Sharing extension is active.

Stuffit Deluxe
A valuable utility for anyone who wants to save disk space or compress files for sending via modem. We've tried 'em all, and Stuffit is the best of the bunch.

Adobe Acrobat
Print a PostScript file to disk, run it through Acrobat Distiller, a PostScript Level 2 interpreter that creates portable document format (PDF) files, and then distribute these files to users for printing, faxing or reading on line with Acrobat Exchange or Acrobat Reader. It's as close to electronic paper as anything else we've seen, and after a slow start, it appears to be catching on.

Much to the chagrin of those who paid to license the Acrobat Reader software last year, Adobe has now made the Reader software, which allows Mac and Windows users to read Acrobat PDF documents, available for free. (Acrobat Reader is also available for DOS and Unix, with some distribution limitations.) Look for a full review of Acrobat 2.0 in an upcoming issue.

TextBridge OCR
At under US$100, this program shows that OCR needn't be as expensive or as inaccurate as packages costing several times as much might suggest. Although we wish TextBridge was able to paste directly into a word processor or application the way that OmniPage Direct can, its accuracy and value is outstanding. If you own a scanner and a Mac, you should get TextBridge.

CopyRight Pro
We spent some time putting CopyRight Pro through its paces recently and we're impressed. We thought we'd have to work through aliases to handle offline exceptions, but it does it all by itself, as long as the permissions are correctly set. Fast, too. If you find yourself waiting around while a Mac copies files, you'll love CopyRight Pro.

Our only complaint about CopyRight Pro is its current nonfunctionality on PowerMacs. For these users, the CopyDoubler function of Norton DiskDoubler Pro (which also works on 68K Macs) is the next best thing.

Booby Prize
In early September, Symantec Corporation issued an alert that the Speed Disk module of Norton Utilities for Macintosh, version 3.0, had a "serious technical problem" that could cause data loss. An update to version 3.01 was released shortly thereafter, but this must have been a PR nightmare for the firm. ❑

MAX SYSTEM
Computer and Office Automation Centres

* Pre Christmas Sales *
Accept Government and Corporate PO
Networking, Upgrade, Repairing and Leasing

HEWLETT PACKARD
Canon
digital
intel inside pentium

Entry System

VESA 32 bit Local Bus Main Board
128K External Cache
4 Meg RAM @ 70 ns
210 Meg IDE Hard Drive
Japanese 1.44 Meg Floppy Drive
Advance Logic VESA Video w/ 1MB
(20% faster than Cirrus Logic, Exp. 2MB)
ACER 14" N.I. 0.28 SVGA Monitor
IDE Controller w/2S 1P 1G Ports
Professional Mini Tower / Desktop Case
Spill Proof Enhanced 101 Keyboard
Serial Mouse w/ Pad
1 Year Parts & 2 Year Labour Warranty

486SX-33	486DX-33
$1,199	$1,249

Upgrade Options

8MB RAM	$200
256K Cache	$25
1.2MB Floppy Drive	$60
VESA IDE HD/FDD Controller	$20
Medium Tower Case	$40

Business PRO

VESA 32 bit Local Bus Main Board
128K External Cache
4 Meg RAM 70 ns
420 Meg IDE Hard Drive
Japanese 1.44 Meg Floppy Drive
Advance Logic VESA Video w/ 1MB
(20% faster than Cirrus Logic, Exp. 2MB)
ACER 14" N.I. 0.28 SVGA Monitor
VESA 32 bit IDE HDD/FDD Controller
2 x Serial / 1 x Parallel / 1 x Game Port
Professional Mini Tower / Desktop Case
220W CSA Power Supply
Spill Proof Enhanced 101 Keyboard
Serial Mouse w/ Pad
1 Year Parts & 2 Year Labour Warranty

486DX-33	486DX2-66
$1,309	$1,399

Upgrade Options.

Dos 6.2 (Disk & Manual)	$50
Windows 3.1 (Disk & Manual)	$65
IBM OS/2 Warp V3.0 (CD Version)	$115
540MB IDE Hard Drive	$70
SVGA Card w/2MB Memory	$68
ATI Mach32D Graphic Ultra 2M.B	$110
MAG 15" N.I. Monitor LR Digital	$200
MAG 17" N.I. Monitor 21 1280	$650

Pentium PCI

Genuine INTEL PENTIUM CPU
PCI 64 BIT Local Bus Main Board
256K External cache, 3 PCI Slots
8 Meg RAM 70 ns 72 pin SIMM
ATI Mach 64D PCI Graphics w/ 2MB
540 Meg IDE Hard Drive
PCI IDE Controller
Japanese 1.44 Meg Floppy Drive
MAG 15" N.I. 1280 SVGA Monitor
Complies MPR-II Low Radiation FST
Professional Mid Tower Case w/ 220W
Honeywell 101 Enhanced Keyboard
Serial Mouse w/PAD
1 Year Parts & 2 Year Labour Warranty

PENTIUM-60	PENTIUM-90
$2,599	$3,099

Upgrade Options

1 GB SCSI Hard Drive and SCSI-2 Adaptec 2940 PCI Controller	$840
16 MB RAM 72 Pin SIMM	$380
MAG 17" N.I. Monitor 0.26	$450
Full Tower Case (250W Power Supply)	$40

Printers

Citizen G220 24 pin w/ color kit	$279
Canon BJ200E w/ feeder	$340
Canon BJC4000 w/ feeder color	$718
Canon BJ10sx W/ feeder	$308
Digital 1152 Laser 300dpi PS, 2mb	$675
Okidata OL400e Laser 300dpi 512K	$560
Epson 1900 Laser 600dpi 2mb	$1309

Hewlett Packard

HP DeskJET 540 nk (Color Option)	$440
HP 4L Laser 300 dpi 4ppm 1mb	$880
HP 4P Laser 600 dpi 4ppm 2mb	$1320
HP 4MP Laser 600 dpi, 4ppm, 6mb, PS	$1995
HP 4 Laser 600 dpi, 4ppm 2mb	$1870
HP 4+ Laser 600 dpi 12ppm, 2mb	$1935

Monitors (SVGA)

Daytek 14" N.I. 1024 0.28	$299
Megaimage 14" N.I. 1024 0.28	$289
ACER 14" N.I. Green LR 1024 0.28	$315
Daytek 15" N.I. Green LR 1280 .28	$469
MAG 15" N.I. Green LR 1280 Digit.	$499
Daytek 17" N.I. Green LR 1600 .28	$889
MAG 17" N.I. Green, LR 1280 .28	$889

** NEW OS/2 Ver 3.0 (CD) $120
(w/ additional $25.00 Rebate)

Mother Board / VGA / MODEM

486 DX-33 128K VESA (INTEL)	$290
486 DX-40 128K VESA (AMD)	$340
486 DX2-66 128K VESA (INTEL)	$420
Pentium 60MHz 256K PCI	$660
Pentium 90MHz 256K PCI 64 bit	$1500
Advance Logic VESA SVGA Card 1mb	$105
S3 805P VESA SVGA Card 1mb	$110
AT MACH32D VESA/PC 1mb	$140
AT MACH64D VESA/PC 2mb	$320
VESA IDE Controller (2S/1P/1G)	$30
VESA IDE Controller w/16550 UART	$55
ACEEX 96/24 FAX/MODEM int	$40
USR 14.4 FAX/MODEM Qtmd2, int	$156
USR 14.4 FAX/MODEM Qtmd2, ext	$188
GVC 14.4 FAX/MODEM W/fax, int	$120
GVC 14.4 FAX/MODEM W/fax, ext	$155
GVC 2.88 FAX/MODEM W/fax int	$280
ACEEX 14.4 FAX/MODEM int	$120

Best Buy For X'mas Gift
Multimedia Bundle.
Creative SB Pro 16 MCD
Panasonic 2X CD ROM
Amp speakers w/control
MPC Encyclopedia CD
$320

Sound Card / CD ROM

Golden Sound Pro-16 (SB 16 MCD comp.)	$120
Pro Audio Spectrum 16 (SCSI CD interface)	$125
Sound Blaster Pro 16 MCD (OEM)	$149
Sound Blaster Pro 16 ASP	$249
Sanyo SCSI CD ROM (Double Speed)	$179
Panasonic CD ROM 562B (Double Speed)	$170
Golden Sound Hi-Fi Speaker (150W)	$95

Hard Drive / SCSI Ctrl

420MB Seagate	$260
450MB Seagate	$295
540MB Seagate	$340
730MB IDE Quantum	$499
1.0GB IDE WD	$699
1.0GB SCSI Quantum	$860
1522 Adaptec SCSI	$125
2940 Adaptec SCSI	$390

Computer Training (North York)
- *DOS*
- *Windows*
- *C++*
- *Words*

SCARBOROUGH
23 Milliken Blvd. Unit B9
Scarborough, Ontario
Tel (416)609-0946
Fax (416)609-2491
Monday - Sunday

MARKHAM
825 Denison St. Unit 4
Markham, Ontario
Tel (905)946-9440/9441
Fax (905)946-1098

NORTH YORK
142 Willowdale Ave
2nd Fl., North York, Ont.
Tel (416)223-3357
Fax (416)223-2249
Monday - Sunday

Distributing And Corporate Centre
(Dealers & Corporate Only)
500 Alden Road, Unit 4
Markham, Ont
Tel (905)474-5098
Fax (905)474-5096

* *All prices are cash discounted and subject to change without notice. All brands and company names are trademarks or registered trademarks of their respective owners.*

MAC SECTION

Foldermenu Improves Now Utilities 5.0

BY GRAEME BENNETT

The only thing to fear is the fear of nested folders
And ah have lost mah feah of nested foldahs, brothahs and sistahs

Once illuminati at Now Software's quality control give their blessings version 5.0 of Now Software's popular suite of Now Utilities should be hitting the shelves and we predict the top of the software utility sales charts.

The most obvious new feature in Now Utilities 5.0 is Foldermenu which makes it painless to see nested subdirectories without forcing you to scroll forever to see all of the contents. However some users may find it rather inconvenient, when dragging items to other folders or drives when Foldermenu kicks in and disrupts the dragging operation. To partially address this, the Control Panel allows the pop up to be delayed by up to two seconds.

Businesses that use Macintosh computers to retrieve files from a server will be happy to know that version 5 addresses the most annoying problem with version 4 of Now Menus. In that release files launched off a remote drive left the name of the disc permanently attached to a pop-out Chooser submenu. If the disc was renamed or removed (with removable drives this was a real problem!) the name would be there to haunt you forever — at least until you called Now Tech support or figured out the convoluted workaround yourself. Now, in version 5, recently accessed drives documents and applications can be added and removed at will.

SuperBoomerang which we have long considered the essential Macintosh utility, now uses a smaller font for its search dialog, allowing whole file names to be seen. (On the Mac, file names can be up to 31 characters long.)

While we won't give up our use of Aladdin StuffIt Deluxe in favor of this package's QuickFiler, an updated version of the previously separate Now Compress the rest of Now Utilities 5.0 have found a happy home on our Mac's hard drive. Version 5.0 is another winner for the Portland OR-based developer. ❑

Contact Now Software 503-274 2800

BOOK REVIEW

Mac & Power Mac Secrets Takes the Crown

BY GRAEME BENNETT

Title	Mac and Power Mac Secrets
From	IDG Books
Price	$54.95

If you're a Macintosh user who has been at it for more than a few years, you've probably heard of a book called the Mac Bible — a veritable treasure trove of tips, tricks and trivia.

If you're new to the Mac, you may have had the book recommended to you by a grizzled old Mac guru perhaps even pressing his or her own dog eared copy into your neophyte hands. The Mac Bible has long been considered a new Mac user's best friend. Well move over Mac Bible. IDG's 2nd edition of Mac & Power Mac Secrets is a better book — and a better value — by far.

Continued on page 82

SAVE $1000
On Toshiba
Active Colour
486SX/33 Sub Notebook 4/250Meg
DOS/Windows/Pointer/Carr. Case
3-year MFR's warranty. Now Only
$2999.00
FREE PCMCIA MODEM & CARRYING CASE WITH MOST MODELS - LIMITED TIME ONLY
Toshiba Notebook Deals
T-1910 486-SX-33
Many more in-store specials
Prices cash discounted

SAMSUNG
Super Deal
486SX-25 Notebook 4/170Meg
2-year MFR's warranty. Now Only
$1599.00

Samsung Premium Active Colour
486-SX-25 (DX Upgradeable)
4/170Meg. DOS/Window/Trackball,
Reg. $3899 Now Only
$2999.00

CLEARANCE ON DEMOS AND DISCONTINUED MODELS. SAVE UP TO 50%

SHARP
Super Deal
PC-Compatible Palmtop Computer
Dual PCMCIA, built-in word processing spreadsheet, data base, address book, scheduler, DOS. Reg. up to $899
Optional 3.5" Floppy Dr. 1/2 price $129.00
$399.00

SUPER DEALS
ON A WIDE RANGE OF
ELECTRONIC ORGANIZERS
SHARP•CASIO•PSION
PSION FAX MODEM IN
STOCK ONLY $399

NOTEBOOK REPAIRS – UPGRADES – TRADES
Best selection of notebooks in Toronto.
BEST PRICES
We will not knowingly be undersold.
No phone quotes please.
RENTALS –TRY BEFORE YOU BUY. MAIL ORDERS
MARKETRON Since 1976
1-5 CENTRE CONCOURSE
KING/BAY AREA
(416) 366-3168
MON. - FRI 9:30-6
LAWRENCE SQUARE
700 LAWRENCE AVE. W./ALLEN RD.
(416) 256-7000
MON. - FRI 10 - 8 SAT 10 - 4

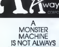
Anchors Away
CORPORATION

YOUR Computer Re-Marketing Specialists
" Trade In " Used and New " Buy and Sell "
Hours 10am to 6pm Mon->Fri 10am to 5pm Saturdays
7026 Tomken Rd Unit 17 Mississauga
PHONE (905) 795 8181 FAX 795 2749 BBS 795 2750

FOR INSTANT FAX INFO
DIAL 1-800-463-7363
EXT 5555
COME ON IN AND
BROWSE OUR NEW
LARGER WAREHOUSE

A
MONSTER
MACHINE
IS NOT ALWAYS
WHAT IS NEEDED

OPEN EVERY SUNDAY IN DECEMBER



OUR WIDE RANGE OF USED REFURB,END-OF-LINE NEW SYSTEMS OR UPGRADES PROVIDE AN EXCELLENT ALTERNATIVE

WE HAVE AVAILABLE SELECTED SYSTEMS FOR SHORT AND LONG TERM
★ RENTALS ★
RENT A COMPAQ 386NB (WINDOWS READY) WITH CANON BJ-10 PORTABLE INKJET PRINTER
MONTHLY RATE ONLY
$149

FREE SOFTWARE PACKAGE WITH THE PURCHASE OF (ANY) COMPUTER SYSTEM WHILE QUANTITIES LAST

E.&O.E.

BEST BUYS!!!

SYSTEM
486 SLC/33-4MB/170MB
KB 1.44,512KB SVGA
M/T,6 MONTH WARR WITH
14" SVGA COLOUR MONITOR
$949

NOTEBOOK
COMPAQ LTE 386SX/20 4MB/60MB
9600 S/R FAX/MODEM
WITH CANON BJ-10
(INCL SHEET FEEDER) 90 DAY WARR
$1199

HP VECTRA 386DX
WINDOWS WORKSTATION
16 MB RAM
100 MB HARD DRIVE
$999

SYSTEMS

XT'S- 640K,HD KB,FL,MON FROM	$ 179
AT'S- 640K,HD,KB,FL,MONO MON FROM	$ 279
AT'S- 640K,HD KB,FL VGA MONO FROM	$ 349
AT'S- 640K,HD KB,FL VGA COL FROM	$ 449
DELL 386SX 2MB/40 HD KB FL,256K VGA ADD 2ND FLOPPY FOR $30	$ 399
AST 386DX/33 4MB/120 HD,KB,FL,512K SVGA,DOS WIN MSE 1 YEAR WARRANTY NEW!	$ 799
NEC IMAGE 486SX/25,4MB/120HD,DOS WIN 8 MO WARR,NEW	$ 1049
COMPAQ PROLINEA 486DX/33 4MB/120HD,DOS WIN 8 MO WARR,NEW	$ 1199
*AS ABOVE WITH FAX/MODEM	$ 1249
(ADD AN SVGA MONITOR TO ANY! (OF THE ABOVE SYSTEMS!	$199

NOTEBOOKS

GRID 286 1MB/20HD 1.44 VGA MODEM,30 DAY WARR	$ 549
COMPAQ 286 LTE 640K/40HD 1.44 LCD MODEM 30 DAY WARR	$ 549
LASER 386SX/16 2MB/40HD 1.44 VGA MODEM 30 DAY WARR.	$ 749
SIEMENS(PANASONIC) 386SL/25 4MB/40HD 1.44 VGA DOS 5.0,WIN 3.1 TRACKBALL 90 DAY WARR NEW!	$ 1199
UNISYS(AST) 386SX/25 4MB/120HD 1.44 VGA TRACKBALL 90 DAY WARR	$ 1099
SAMSUNG 486SL/25 4MB/120,1.44,VGA 1YR WARR,NEW!	$ 1399
TI 486SX/25 4MB/120MB 1.44 VGA,DOS WIN TRACKBALL ADVANCED PASSIVE COLOUR 1 YEAR WARRANTY	$ 1959

MISCELLANEOUS

SOFTWARE (VARIOUS) FROM	$ 15
DOS 5.0	$ 25
720 K FLOPPIES (NEW-30 DAY WARR.)	$ 35
HONEYWELL 101 KB S (NEW)	$ 40
1.2 MB FLOPPIES (30 DAY WARR.)	$ 45
387DX/40 MATH CO-PRO	$ 50
DOS SOFTWARE BUNDLE PARADOX 3.5, APPLAUSE 1.6	$ 75
PURE DATA PDI8023-1? ETHERNET CARDS	$ 99
IBM CITIZEN/NOTEBOOK PRINTERS	$ 329

HARD DRIVES

QTM GO 40A,2.5,42MB,IDE 16MS	$ 99
SGT 9077A,2.5,64MB,IDE,16MS	$ 119
QTM 127MB IDE 17MS 32K,ELS	$ 189
MAXT 131 MB IDE 14MS 64K	$ 199
QTM 170MB IDE 14MS 128K,LPS	$ 179
SGT 2502NV,5.25 FH,440MB SCSI 16MS,NVL	$ 399
SGT 2502NM,5.25 FH,440MB SCSI 16MS,SCSI,MAC	$ 399
SGT 42100N,5.25 FH 1.9GB 12-9MS,256KB-SCSI-2	$1199

MONITORS
DEMO 90 DAY WARRANTY EXCEPT AS NOTED

CGA 30 DAY WARR	$ 69
EGA 30 DAY WARR	$ 89
MONO VGA 30 DAY WARR	$ 99
IBM 8513 12" .28 VGA COL	$ 199
14" VGA COLOUR (VARIOUS)	$ 209
14" SVGA COL. (VARIOUS)	$ 239
AST 14 SVGA COL	$ 239
AST 1? SVGA COL	$ 399
17" SVGA COL. (DARIUS/DAEWOO)	$ 609

MONITORS
FACTORY RE-SEALED 2 YEAR WARRANTY

14" SVGA .28 I	$ 259
14" SVGA .28 NI	$ 279
15" SVGA .28 NI	$ 399
17" SVGA .28 NI (1280)	$ 749
20" SVGA .31 NI (1280)	$1299

PRINTERS

SIEMENS 9 PIN (NARROW) 30 DAY WARR.	$ 89
EPSON LX810 9 PIN (NARROW) 30 DAY WARR.	$ 139
9 PIN (WIDE) VARIOUS 30 DAY WARR.	$ 199
9 PIN SAMSUNG (NARROW) 2 YEAR WARR	$ 169
24 PIN SAMSUNG (NARROW) 2 YEAR WARR	$ 199
LASER FINALE 8000 (HP & COMPAT.PS) 2 YR WARR.	$ 999

"CALL FOR VOLUME DISCOUNTS"

Review. Word 6.0 for Mac

Beauty in the Beast

BY GRAEME BENNETT

Product Microsoft Word 6.0 for Macintosh
From Microsoft
Price $495 Upgrades: $149 Also available as part of Microsoft Office 4.2

There is a phenomenon I like to call Netspeak where the hackers and the flamers — the most vocal denizens of any particular on-line gathering — start a rumor that other people mistake for The Real Thing.

Hackers and flamers are a pretty predictable lot Typically, these propeller heads get together in cyberspace and pursue their favorite topic whining They whine about software software companies and as soon as you tell them to get over it, they'll start in about freedom of speech

I suppose it's an ego booster to be the first one to complain that fill in the-blank 6.0 is a worse piece of crap than the version that preceded it that it's a memory hog or it take up too much disk space runs slower, etc etc Well In case you haven't heard one of these diatribes yet there's a really big one brewing Out There about Microsoft's latest relase of its market-dominating wordprocessor for the Mac And it cannot be denied It is all of those things But I think I'm going to switch to it anyway Why? Because it's the best word processor on the Mac and the features in version 6.0 are frankly just what I — and thousands of others, I'll wager — wanted

For starters, I think the complaints about its speed — or lack thereof — are greatly exaggerated. Scrolling is plenty fast on a moderately well-equipped Mac even in thousands-of-colors mode and it opens text files (etc) much more quickly and intelligently than version 5.x did

Several other minor details have caught my fancy Too I love having multiple undos (the Redo key command is the same as in Aldus FreeHand) and at last I am able to Select All and then use the cursor keys to jump to the bottom of the file

Although I'm probably one of the few old timers that realizes that Microsoft didn't invent the concept of an auto-checker that corrects errors as you type it will at last largely put an end to the endless parade of common typos that come from fingers that don't always do what they're supposed to

If you're one of those people that never uses toolbars if you can't figure out what the icons mean Word 6 may make a convert out of you yet The Tool Tips feature reveals what all those little icons actually mean by putting their name in a yellow box just below the icon when your mouse lingers nearby

I'll receive hate mail from Mac interface purists for saying this but I really like the fact that Word 6 shows the keyboard equivalents for buttons by underlining the shortcut key I also find handy the Control Panel that comes with Microsoft Office that allows you to switch applications "Windows style" by pressing Command Tab (a nod to the Windows Alt Tab convention) It is strange though that this function breaks one of Word's own features: Command/Tab invokes "Menu Mode" only if this feature is disabled in the Office Manager Control Panel (Luckily F10 also invokes this function) Fortunately I found a shareware program (actually the author calls it "advertising-ware") called Option Tab Program Switcher that solved the problem

Of course, I have other complaints too Although Word 6's default configuration does not support the numerous hierarchical font menu enhancements on the market such as Now Software's WYSIWYG Menus an optional configuration designed to assist Word 5.1 users in upgrading is provided as a macro that adds a Font menu between Format and Tools menus. This is necessary for system extensions that show the font in its actual typeface or in pop-out submenus Although both Now Software and Microsoft told us that Now Utilities (versions 4.x and 5.0) are not fully compatible with Word our tests indicated no obvious problems beyond the inability to assign menu key-equivalents with Now Menus. (Word uses its own Customize option to do this anyway)

Thanks to Microsoft's wacky font handling until I ran the AddFontMenu macro, Times Bold and Hevetica Bold appeared next to each other in a Windows-style toolbar list, while their non-bold siblings resided in other areas of the list

At first I thought Word 6 didn't support Apple's Balloon Help As it turns out, it's just that it takes almost three seconds to display So in essence there are three levels of online help available tool tips Balloon Help, and Windows-style hypertext help. Additionally the Help menu includes options for "Quick Preview " "Tip of the Day " and "Examples and Demos " If you get badly lost the Help menu also lists the phone numbers for Microsoft's Redmond, WA based and Canadian Technical Support lines I waited about four minutes (on my dime) for technical support from Redmond but a technician answered all of my questions correctly and thoroughly When I called the Canadian office I waited nine minutes. The technician confirmed a bug in the program when Office's QuickSwitch function is enabled This feature breaks Word's Menu mode

Also I was a little disappointed that Word's "Smart Quotes" feature (which produced the typographer's quotes in this sentence automatically) still gets fouled up by such common circumstances as 3.5" or an apostrophe before the abbreviated form of the year The quotation marks in

"the best of 94 on 3.5" diskette"

should be

"the best of '94 on 3.5" diskette "

Programs such as the shareware title Add/Strip are smart enough to handle special cases such as when a quotation mark follows a number so why can't Word? It is however possible to insert character codes from a simple dialog box allowing characters symbols, and dingbats to be selected by pointing and clicking Apparently the Command-Option Q shortcut for entering character codes directly is history

Although the program's Autoformat option seems like a good idea in practice, it doesn't do a particularly impressive job at formatting stories like this one The only obvious formatting it did was to change the Product, Price and From lines near the top of the file to Helvetica— at first glance seemingly no big deal On closer examination it did a few other more subtle changes too. It changed the first two lines to a stylesheet called "List" and inserted tabs on the aforementioned product info lines — all handy, but easily overlooked details Text files with lists of bulleted items and obvious section headers get a more impressive formatting treatment — hanging indents tabs and bold subhead stylesheets

Another thing to consider if you're wondering whether you should upgrade is file format compatibility After all if you are using a DTP program that doesn't accept Word 6.0 files you could be in for a lot of conversion hassles QuarkXPress 3.3 for example couldn't read the files

In mid-October, a Quark technician responding to questions on CompuServe said the company had not yet announced any plans to provide a Word 6.0 filter, but we have since heard that the company is working on this However until this filter is ready the only solution is to save files in another file format MS Word 6 supports a variety of common formats, including RTF Word 4 and 5.x Word for Windows 2.0 WordPerfect for Mac DOS and Windows (including v3.x for Mac and 5.x for PC) ASCII text and a number of other formats.

Keep in mind, too, that Word 6 is RAM hungry We tried using it on a Quadra 605 with 4 MB of memory, and found it slow to the point of being completely impractical for editorial duties When we installed an additional 8 MB of RAM, however, its responsiveness improved dramatically

In our tests, (these conducted on a Power Macintosh, not the Quadra 605) Word 6 took considerably longer to load than version 5.1 The former loaded in 1:06 Word 5.1 for the Mac took 42 seconds However we were favorably impressed with scrolling speed and the performance of the spelling checker. Amenities such as the word count function were considerably slower than those in 5.1 however

In late October Microsoft told us that the Power Macintosh "native" version of Word 6.0 had gone to disk duplication Registered 6.0 owners who sent in the coupons included with the package should have received the free update by the time you read this

In summary if you have been put off by the naysayers at least check it out for yourself Features may not be everything but the beauty is in the details of this release ❑

Here, There, Everywhere

Here. . . is Elm Street Computer Terminal where you will find great prices on Macintosh Bundles such as

LC 575 8/250

14" Trinitron Monitor
Int. CD-ROM & 4 CD's*
StyleWriter II Printer**
Apple Design Keyboard
One Year on-site Warranty

$2599
Incl ClarisWorks Software

There. . is where you are now but not for very much longer!

Everywhere. . .
is where you will be when you hook up to the Internet with our amazing "Everywhere Starter Kit " for only

$299

includes
- Global Village Teleport Gold II 14 400 bps Faxmodem
- Communications, Fax and Internet software
- 900 page Internet Hand Book
- Internet Seminar with Info Kit

Elm Street Computer Terminal
49 Elm Street Toronto Ontario M5G 1H1
CALL TODAY!
416-591-8684
Authorized Dealer

Apple, the Apple logo are trade marks of Apple Computer Inc. Macintosh is a trade mark of Apple Computer Inc. Offer valid while quantities last

Beam Up QuickTime VR

A look at Star Trek. The Next Generation Interactive Technical Manual

BY RICHARD C. S. "DDC" KINNE

When I learned that my personal hero, Professor Stephen W. Hawking, had sat in the center seat of USS Enterprise and looked around from that vantage point, I was jealous. I'm not as jealous any more, now that I've done the same thing — virtually — thanks to Simon & Schuster Interactive's first virtual reality offering, Star Trek. The Next Generation Interactive Technical Manual.

The Interactive Technical Manual was a hotly anticipated product for several reasons. First, now that the television series Star Trek. The Next Generation has ended, this CD becomes the definitive reference for the series. Second, this CD debuts Apple's QuickTime VR technology. QuickTime VR extends the animation functions of QuickTime with the awareness of spatial relationships needed for virtual reality programming.

I waited with bated breath for this CD-ROM and when I opened the package, my heart was pounding because I feared I'd hyped the product in my own mind so much that I'd be disappointed when trying it. I wasn't disappointed!

Installation of the program is simple. You copy QuickTime 2.0 from the CD to your Extensions folder and then copy one of two software folders to your hard disk, depending on how much disk space you wish to devote to the program. Once that's done, you double click the Interactive Technical Manual icon to run the program. Simon & Schuster provided both 68K and PowerPC versions of the software; the version you don't use needn't be copied from the CD, or you can keep both on a hard disk that travels between computers.

When you launch the software, the "LCARS" computer system from Star Trek's USS Enterprise appears to take over your Macintosh. The futuristic user interface even includes the computer's voice as portrayed by Majel Barrett (Gene Roddenberry's wife). You can go on a guided tour of the Enterprise or go off on your own to explore the ship. You can also use an alphabetical index to jump right to information you're interested in, from warp propulsion system theory to the personal files of Lieutenant Commander Geordi LaForge. After you find something of interest, the LCARS interface makes it easy to access related areas.

Jonathan Frakes, in his TV persona of Commander Riker, narrates the guided tour of Enterprise. Riker takes you through such areas as the exterior of Enterprise, the Bridge, the Captain's Ready Room, Ten Forward (the ship's laid-back tavern), Sickbay, Engineering, and the Holodeck (a 24th century form of virtual reality). Upon entering each area, Riker describes the area and explains its purpose on the ship. During the commentary, the point of view pans the entire area in question so you see everything. You can wander around and explore every area of the tour at any time.

What makes all of this work is Apple's (as yet unreleased to the public) QuickTime VR technology. QuickTime VR is based on QuickTime 2.0, but includes important additional capabilities. Rather than just offer video sequences, QuickTime VR incorporates spatial information about each locale and what surrounds it. As a result, the user can pan through two 360 degree axes (horizontal and vertical) and can move around the "floor," providing a view of any corner of each room. With this technology you can walk yourself from the main turbolift door on the bridge, across the back railing where the Security and Tactical station is, down the starboard ramp (turning your head to take a look at the Enterprise dedication plaque as you pass by it), to the Captain's chair, where you can look around to the chairs to either side, look up to the transparent dome above or down to the instrument panels located on the arms of your command chair. Software such as Virtus Walkthrough has offered such capabilities for mathematically rendered environments, but didn't provide a way of incorporating a real location into the tour.

As you walk about Enterprise you can examine individual objects, like the dedication plaque mentioned above. When you

➤

Long & McQuade Limited
Musical Instruments
925 Bloor Street West, Toronto, Ontario, M6H 1L5 416-588-7886

Long & McQuade is officially an authorized Macintosh Dealer. Discover the Macintosh solution for your business and musical needs. We can supply systems from the complete Macintosh line of computers, monitors, printers, CD Roms and accessories.

The Power To Be Your Best.

- Apple Authorized Service Provider
- Training, Consulting & Networking
- Macintosh & PowerMacintosh
- On-Site Service
- Solution Sales
- Service & Support
- PC Integration
- Best Seller Software

SALES - LEASING - SERVICE - UPGRADES

Canadian Computer
Authorized Dealer
131 Trafalgar Road, Downtown Oakville

call our Sales Consultants for an appointment at your office
(905) 849-0737
or drop by our demo centre

Apple, the Apple logo, The Power To Be Your Best, Macintosh are all registered trademarks of Apple Computer Inc. and are used with permission

$1,999.

- Apple©Colour Plus Monitor (76 DPI)
- AppleDesign Keyboard + Mouse
- LC 630 8 MB RAM/250 MB HD
- PowerPC Upgradable
- Video Slot for NTSC, PAL, S-VIDEO or SECAM video input card
- Energy Efficient

- Free Claris Works
  - -Word Processor
  - Spreadsheet
  - -Database
  - -Communications
- Free EPS Clip Art
- eWorld Software

$499.00
Apple Multimedia Kit

Includes the Apple 300i CD ROM Player, 7 CD-ROMs including the Grolier Multimedia Encyclopedia, Microsoft Dinosaurs, and more. Apple Remote Speakers and Head Phones also included. Price for Multimedia Kit is Valid only with the purchase of an LC 630 as advertised. Quantities of Kits are limited.

AppLAND MICROSYSTEMS INC.
Authorized Dealer
Apple Macintosh™ Specialists
Call and let us Quote on a Custom System!
(416) 533-7668
99 Atlantic Avenue, Suite 200 Toronto M6K 3J8
Apple, the Apple Logo and Macintosh are registered trademarks of Apple Computer Inc.

do so, text appears describing the object in question, and the computer offers a spoken summary With some objects and rooms you can punch up production notes that tell you "behind the scenes facts" about them (Do you know after whom Captain Picard's pet fish is named?)

QuickTime VR enables you to handle certain objects by grabbing them with the mouse and rotating them in three dimensions. In the case of a medical tricorder, the simulation is so good that lights and dials continue to blink while you manipulate the object! Also visually impressive is a user-controllable exterior view in which the USS Enterprise, a large Starbase, and a planet appear Apple's QuickTime specialists believe this feature will be especially useful in museum catalog CDs. Such products will allow museum virtual visitors not only to walk from room to room viewing the exhibits but also to pick up sculptures and other artifacts for closer examination from any angle, a luxury most museums don't dare offer

What kind of resources does a program like this take? The Interactive Manual requires at least 8 MB of memory and about 1.5 MB of hard disk space all told (You can copy less to your hard disk, but the program's responsiveness will suffer.) The native PowerPC version requires comparable resources. Testing on both a Power Mac 6100 and a Quadra 660AV showed good performance in both environments though some canned video sequences (from Commander Riker's tour) jumped a bit on a Quadra 610 that was also handling some background tasks (not surprising) The virtual reality pans were good on all of the tested systems as was the ability to handle objects and rotate them to view all sides. If you don't have 8 MB to play around with, the program will run in as little as 5 MB, but the virtual reality features may be unavailable

So what's the final word for the Star Trek: The Next Generation Interactive Technical Manual? Easy If you are a Mac-owning Star Trek fan with 8 MB of memory and a CD-ROM drive, or you know such a person then I've solved your Christmas gift-giving problems this year This CD is simply a must have The subject matter is elegantly handled the user interface is well thought out and totally in character and with over 630 MB of raw data they've included nearly everything that could be included My only complaint is that I wanted the CD-ROM drive to access information faster than it was designed to

Even if you're not a Star Trek fan this CD ROM is worth seeing just to view the incredible potential offered by the QuickTime VR technology If Apple plays its cards right this technology could take the educational and architectural markets by storm Imagine being an automotive student and viewing car engine parts from all sides simply by dragging your mouse The real estate industry could likewise be transformed. As you walk through Enterprise, imagine being able to do the same thing with the design of your new house before you lay the foundation! Apple did QuickTime VR right.

The Star Trek The Next Generation Interactive Technical Manual is published by Simon & Schuster Interactive and is available now the street price is about US$40 Rush right out you won't regret it! And now, if everyone will excuse me I'm going to take a walk down to Main Engineering Mr LaForge promised me a lesson in warp field dynamics. ❑

Contact: Simon & Schuster Interactive 212-698-7000

© TidBITS #230 reprinted with permission

Mac and Power Mac Secrets

Continued from page 79

In addition to more than a thousand pages of Mac minutae Mac & Power Mac Secrets contains three high-density floppy disks carrying 9 megabytes of software This stuff is not just a bunch of PD or shareware junk The collection includes commercial software including a number of titles we highly recommend Now Software's WYSIWYG Menus PrairieSoft's DiskTop Symantec's Norton Speed Disk Central Point's CP Undelete MicroFrontier's Color It!, Casady & Greene's QuickDex Bitstream Fonts, and numerous others.

In addition there are a number of excellent shareware and freeware titles on the disk including such classics as ZTerm ResEdit SCSIProbe Disinfectant SuperClock and other must-haves that anybody with an interest in exploring their Mac should check out Best of all there's an entire chapter of the book devoted to providing instructions on what the heck to do with all of this software

We don't know how they managed to convince the commercial software vendors to give away full working versions of their software but who cares? This book is the best deal going ❑

DOCTOR Mac

Having computer problems?™

Apple, IBM & Compatible · Database Customizations

Call the experts for on site service!

416 922-7500

Repairs/Installations/Maintenance/Training/Setup/Sales

PASSPORT delivers more MIDI

MusicTime now on CD-ROM!

MusicTime is the solution for real-time MIDI record, playback and transcription. This special CD bundle of MusicTime 1.0 includes • sixteen staves of professional quality notation • high quality output to virtually any printer • on-line help files • an interactive tutorial on Music Fundamentals (from Staves and Clefs to Scales and Chord Theory) • 100 MIDI files of popular songs • and more!

MUSICTIME NOW ONLY $139 CD-ROM

Score big with Encore!

Passport's Encore is an intuitive, easy-to-use scoring program. Features include • graphic interface with real or step time input • transcription from MTPro or MIDI files from other sequencers • up to 64 staves with support for lyrics, percussion and guitar tablature • dynamic markings, repeats & tempo changes reflected in MIDI playback • publishing quality printout • supports EPS graphics • and more!

FOR MAC & WINDOWS SYSTEMS

MasterTracks Pro: the pros' first choice!

Passport's MasterTracks Pro is the easy-to-use professional MIDI sequencer. Features include • 64 track capability with 8 track simultaneous recording • Graphic & Event list windows for detailed editing and control • on-screen "master faders" for mixing ease • SMPTE capability with "cue list editor" for professional synchronization • and more!

MusicTime · Passport MASTER TRACKS PRO · ENCORE

Call for the name of the dealer nearest you. Demo disks available. Dealer inquiries welcome.

MUSICWARE DISTRIBUTORS INC.

641 CALEDONIA RD, TORONTO, ONT M6E 4V8
TEL (416) 785-3311
FAX (416) 785-6416

ClubMac

TORONTO'S FIRST MACINTOSH USER GROUP

Our members are ordinary (and extra-ordinary) people with many different interests and talents, but with one thing in common we all use Macs, and **we're willing to help each other out by sharing what we've learned.**

General meetings are held the second Tuesday of the month at the Hospital for Sick Children, at 7 pm. For more information call the Club Mac Info Line.

Info Line (416) 462-1702 BBS (416) 462-2922
PO Box 34, Station A, Toronto, Ont M5W 1A2

SAVE THE WORLD
...and everything else. Excellent prices and service on Mac Hard Drive upgrades.
•170MB...$299 • 270MB...$359 • 345MB...$399 • 450MB...$449 • 540MB...$499
We will buy your old drive, or we can turn your old drive into an external drive for $125.
• NEW • INSTALLED • TWO YEAR WARRANTY

CPUSED™

264 Dupont Street
Toronto, Ont., M5R 1V7
Tel 1 416 922-2330
FAX 1 416 922-4593

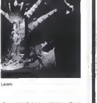
WE BUY AND SELL USED MAC COMPUTERS

PICTURE THIS 10010010

Visual Effects by the Numbers

BY FRANK GARCIA

Clue: Godzilla toys, BC Tel, X-Files and Knowledge Network.



Larami

If you were playing Jeopardy, responding to the category of Special FX and said "What are clients of Northwest FX and Imaging?" your answer would be correct.

Each of these are indeed clients of this premier Special Visual Effects facility in Vancouver. In fact, commercials for Godzilla toys represent a new account. Japan's oldest and most famous monster will be revived via state of the art special effects: computer generated imagery (CGI).

Northwest FX and Imaging is a video production company specializing in digital editing and compositing. That is to say, Northwest takes individual pieces of films and, via sophisticated computers, marries them into one image. And Northwest does it with such finesse — so seamlessly — that if the viewer fails to recognize their work, the job has been accomplished. Digital compositing, in case you didn't know, involves breaking down images into their component parts by translating the data into numbers (1's and 0's); hence, all parts of the image are open to manipulation.

Alex Tkach, Northwest FX's General Manager, says that as a post facility, "we will do product for the corporate broadcast and government community. When the recession hits or anything like that it's important to diversify or go into a specialized area such as visual special effects. Although we still rent cameras and have mobiles for production, the key focus of our production is 85 percent visual special effects. We now supply hundreds of production companies with our services, big and small. Demand is very high for visual special effects. Our concentration two-to-four years ago was seven employees and now we have 17 people."

Despite high demand for their work, says Tkach, the automation and advances in computers have allowed Northwest FX to keep the numbers low on employees. "Everything is by computer. We have a room with $2 million dollars of equipment run by one person. It used to be that it couldn't even run efficiently unless it had five or six employees."

These people consist of art directors, animators, directors, and paint-box artists, with the rest of the company in administration and sales. Thirty freelancers are also kept on-call for specialty work such as morphing, lightning animation and other esoteric visual work. "Morphing has become scary. We've done 250 morphs in the last few years. That means we've been doing a morph every two

►

ZEGNA Wraps Up Xma

Multimedia Systems

4SX-33 FRESHMAN
33MHz 486SX CPU
4MB RAM
MB IDE HD
VGA GRAPHICS CARD
1.44MB FLOPPY DRIVE
14 SVGA COLOR MONITOR
IDE CONTROLLER
DOUBLE SPEED CD ROM
ENHANCED KEYBOARD
MOUSE
MINI TOWER CASE
$1459.00

4DX-33 Home PC
33MHz 486DX CPU
4MB RAM
340MB IDE HD
SVGA GRAPHICS CARD
1.44MB FLOPPY DRIVE
14 SVGA COLOR MONITOR
I/O IDE CONTROLLER
DOUBLE SPEED CD ROM
101 ENHANCED KEYBOARD
MOUSE
MINI TOWER CASE
$1579.00

4DX2-66 Best Buy
66MHz 486DX2 CPU
4MB RAM
405MB IDE HD
LOCAL BUS GRAPHICS
1.44MB FLOPPY DRIVE
14" SVGA COLOR MONITOR
VLB IDE INTERFACE
DOUBLE SPEED CD ROM
101 ENHANCED KEYBOARD
MOUSE
MINI TOWER CASE
16 BIT SOUND CARD
STEREO SPEAKERS
$1889.00

NEW FROM COMPAQ
CONTURA 400C NOTEBOOK
486DX2-40MHz CPU
4MB RAM
250MB HD
9.5" DUAL SCAN PASSIVE
COLOR MONITOR
1.44MB INTERNAL FD
2 TYPE II PCMCIA SLOTS
5.9LBS. 8.9" X 11.9" X 2.0"
MS DOS WINDOWS MS WORKS
LOTUS ORGANIZER PLUS MORE!
INTERGRATED TRACKBALL
$3199.00

Professional Systems

4DX2-66 PROSYSTEM
66MHz 486DX2 CPU
4MB RAM
405MB IDE HD
LOCAL BUS 1MB GRAPHICS
1.44MB FLOPPY DRIVE
14 SVGA COLOR MONITOR
VLB IDE INTERFACE
14.4 INTERNAL FAX MODEM
101 ENHANCED KEYBOARD
MOUSE
MID TOWER CASE
$1759.00

EXECUTIVE P5-60
PENTIUM 60MHz CPU
8MB RAM
405MB IDE HD
PCI 1MB GRAPHICS
1.44MB FLOPPY DRIVE
14" SVGA COLOR MONITOR
ENHANCED PCI INTERFACE
14.4 INTERNAL FAX/MODEM
DOUBLE SPEED CD ROM
101 ENHANCED KEYBOARD
MOUSE
MID TOWER CASE
$2799.00

EXECUTIVE P5-90
PENTIUM 90MHz CPU
8MB RAM
405MB IDE HD
PCI 1MB GRAPHICS
1.44MB FLOPPY DRIVE
15" SVGA COLOR MONITOR
ENHANCED PCI INTERFACE
14.4 INTERNAL FAX/MODEM
DOUBLE SPEED CD ROM
101 ENHANCED KEYBOARD
MOUSE
MID TOWER CASE
$3359.00

CONTURA AERO 4/33C
SUB-NOTEBOOK
486SX 33MHz CPU
4MB RAM
170MB HD
COLOR STN VGA
TYPE II PCMCIA SLOT
CONVENIENCE BASE
EXTERNAL 1.44MB FLOPPY DRIVE
4.2LBS. 7.5" X 10.25" X 1.7"
INTERGRATED TRACKBALL
MS DOS, WINDOWS, MS WORKS
LOTUS ORGANIZER PLUS MORE!
$2499.00

- IN STORE AND ON SITE SERVICE
- 2 YEAR WARRANTY ON SYSTEMS
- LEASING AVAILABLE

Novell Netware 3.12

Novell 3.12 - 5 user Server with 4 Workstations

Server:
486DX2-66
8MB
540MB HD
1.44MB Drive
Ethernet NIC
14" Mono VGA
101 Keyboard
Mini Tower Case

$5699.00

- Free On-site Evaluation
- Free Consultation
- Networking Products

4 Workstation:
386DX-40
4MB
1.44MB Drive
Ethernet NIC
IDE
14" Mono VGA
101 Keyboard
Mini Tower Case

ZEGNA Electronic Inc.

Mississauga
Phone (905) 848-9822
Fax (905) 848-9824

Markham
Phone (905) 479-8892
Fax (905) 479-1845

Markham
Mississauga 1318 Dundas St E. #17
Vancouver-Corp. 210-11180 Voyageur Way
Richmond-Retail 116-4940 #3 Road
Nanaimo
Courtenay Box 3821
Hong Kong
China

1200
dpi film output
$6.95 per page (8½ x 11)
special offer valid until December 15, 1994 with this ad only
Scanning b/w or color up to 2400 dpi
Color Separations
Mac/PC All software, Adobe Type Library
Film/Paper up to 3000 dpi/200 lpi
Digital Color Output — Fiery/MIS/3M
Color Keys — Offset Printing
(416) 920-3040
(Moor & Avenue Road)

DATA CONVERSION
Complete Service and Systems
To / From any Format
- 9-Track Tape • 3480 Cartridge
- 4mm DAT • 8mm DAT
- QIC Tapes • TK-50 70 85
- CD ROM • ALL Diskettes

DOS IBM OS/2 RS6000
Windows and SUN platforms
UNIX TAR CPIO SYS36 VMS and
RS11 Backup dBase formats

SHAFFSTALL CANADA
250 Den Park Road Unit 15
Markham Ontario L3R 2V1
(905) 477-4610 • Fax 477-9723

BIG BOSS COMPUTERS

905-883-0115

MULTIMEDIA BY CREATIVE LABS.

DISCOVERY CD16 $ 385 00
DIGITAL SCHOOLHOUSE $ 399 00

NEC 4X SCSI CD DRIVE $ 569 00

PRINTER :
CANON BJ 100 $ 329 00
CANON BJC-4000 $ 758 00
EPSON STYLUS 800+ $ 309 00
EPSON STYLUS 800+ CLR $ 799 00
HP 540 DESKJET CALL
HP 560C DESKJET CALL
HP 4L LASERJET CALL
OKIDATA OL410E $ 829 00
PAN P4400-1 $ 618 00
PAN P5400 2M $ 989 00

FAXMODEM :
USR SPORTSTER 14 4 I $ 188 00
USR SPORTSTER 14 4E $ 199 00
BOCA 14 4 I $ 139 00
BOCA 14 4 E $ 185 00
GVC 14 4 I $ 138 00
GVC 14 4 E $ 158 00
GVC 28 8 I $ 288 00
GVC 28 8 E $ 309 00

INTERNET STARTER KIT FOR WINDOWS $ 45 00

25-1 44M BIT DISK $ 12.95

CD ENTERTENMENT & SOFTWARE TITLES
12 Pak 5 ft Vol 1 $ 49 99
12 Pak 5 ft Vol 2 $ 52 99
Author's Teacher Trivia $ 22 99
Carmen SanDiego Deluxe $ 21 99
C.H.A.O.S Continuum $ 21 99
Iron Helix $ 27 99
Grolier Prehistoria $ 28 99
Gus goes to Cybertown $ 17 99
Mad Dog II $ 34 28
Mathematics Library $ 27 50
Microsoft Money $ 24 99
Microsoft Encarta 94 $ 69 99
Microcosm $ 25 99
Quantum Gate $ 34 99
Return at Zork $ 24 99
Sport Illustrated 94 $ 19 99
Star Trek 25th Ann $ 35 99
The Family Doctor 3 ED $ 21 99
The Journeyman Proj $ 33 99
TFX $ 44 99
Who shot Johnny Rock $ 28 99
XF5700 Mantis $ 19 99

10111 YONGE STREET , RICHMOND HILL
1 BLK NORTH OF MAJOR MACKENZIE

MANTIS

days!" quips Tkach

Morphing is the esoteric electronic transformation of one object into another object

Additional clients include Evening at the Improv and MTV "We're the end of the line We also go on the set and on location to tell them what we want and don't want"

As we went to press Northwest FX and Imaging has also taken on Showtime Cable's remake of the classic 1960s TV series The Outer Limits as a client They start on episode No 6 The Outer Limits will be seen in Canada via the Pay-cable network, Superchannel.

Commercials are the bread and butter for the company with a stable of clients such as Toyota Ford and G.M , "We also do a lot of station identification, movie bumpers that sort of thing," says Tkach

Some of the company's work is currently visible in Fox TV's cult hit series X-Files and in the independent film Whale Music Getting X Files as a client came about when the show's director David Nutter became a fan after Northwest did work on an arctic station episode called "Ice" In that story alien worms infested the bodies of a dog and scientists

"David is a very big fan of Northwest He liked the fact that not only could it all be done in Vancouver that we did a hell of a good job That's actually what gave us the contract Because of that episode of X Files, we got on to the show and we've been on the show ever since"

Nutter also used Northwest FX talents on a Romania shot direct for a video film called Trancers V, starring Tim Thomerson.

For Whale Music, imagine a man and a woman (lead actors Maury Chaykin and Cyndy Preston) at the foreground of the shot looking out into the waters of a river about mid-level with mountains in the far background Swimming past the couple clearly visible in the river is a school of killer whales "We placed the whales in the scene" says Tkach "That's pretty good because we used stock footage of whales. We completed everything digitally and then we transferred it to 35mm film The director and the producer identified that this was probably the best work they've seen because it looked better on film than it did on the stock footage"

Tkach advised me to catch an upcoming M.A.N.T.I.S. and said he would quiz me later I did watch the show Knowing something about SFX, after years of enjoyment with some study I thought I would be able to nail all the appropriate spots I counted what I believed to be some 30 digital SFX shots. Tkach divulged there were, in fact, 90 individual shots enhanced by digital special effects

So much for my expertise

One shot in particular had the M.A.N.T.I.S leaping from one rooftop to another Tkach revealed that was not a stunt man at all but a CGI of the character Much of the work consisted of subtle enhancements of scenes containing gun shots or video display units.

The biggest challenge ahead for companies like Northwest says Tkach is convincing producers and powers-that-be in Hollywood to embrace digital SFX as an alternative to traditional practical optical effects work.

"There are many who still believe in opticals in film. This world of digital is still very new" notes Tkach. "The difference is doing SFX for $30 000 optically or $15 000 digitally They don't understand how good the quality is The toughest part is explaining to an experienced producer who's done films for the last 25 years that it can be done better our way"

A major reason that filmmakers such as James Cameron Steven Spielberg and George Lucas are so successful says Tkach is because they are among the few who recognize and utilize the potentials of digital SFX in film

"Canadian producers and directors are

►

ViNA COMPUTER
1162 COLLEGE ST.
Tel. (416) 531-3698
Fax. (416) 531-3260
Toronto, Ontario

MOTHER BOARD
386DX-40 128K AMD ISA $143
486DLC-33 128K CYRIX ISA $149
486DLC-40 128K CYRIX ISA $169
486DX-33 128K INTEL VL-BUS $375
486DX2-66 128K AMD VL-BUS $399
486DX2-66 128K INTEL VL-BUS $425
HARD DRIVE
QUANTUM 210Mb 14ms 64K $210
CONNER 420Mb 14ms 64K $265
QUANTUM 420Mb 12ms 128K $275
QUANTUM/IBM/SEAGATE 540Mb $335
MONITOR
MEGAIMAGE 14" SVGA NON-INT 0 28 $310
MEGAIMAGE 15" SVGA NI GREEN LR $459
MEGAIMAGE 17" SVGA NI GREEN LR $825
ACER 14" SVGA INT 0 28 GREEN $285
ACER 14" SVGA NI GREEN 0 28 $325
ACER 15" SVGA NI GREEN LR 0.28 $489
ACER 17" SVGA NI GREEN LR 0.27 $828
VIDEO CARD
TRIDENT 512K ISA $48
TRIDENT 1MB SVGA ISA $78
ATI MACH8 1Mb ISA & MOUSE $88
CIRRUS LOGIC 1Mb 5422 VL-BUS $105
ATI MACH32 1Mb DRAM VL-BUS $149
ATI MACH64 2Mb DRAM VL-BUS $289
KEYBOARD
MITSUMI BTC 101-KEY $20

486DX2-66Mhz/128K $399
ATI MACH32/1Mb/VL $149
14.4 FAX/MODEM INT. $95
CONNER 420Mb $265
Prices & availability subject to change without notice - Limited quantity on some items

UPGRADE
Pick any parts we'll Install Setup and Test in Your system for only
$25
FREE with any system purchase

486DX2-66
AMD 486DX2-66Mhz 128K VL-BUS GREEN
4Mb SIMM Memory/70ns/72 Pin
CONNER 420Mb IDE Hard drive
1 44Mb Panasonic Floppy Drive
ACER 14" SVGA 0.28 NON-INT,GREEN
CIRRUS LOGIC 5428 1Mb VL-BUS
IDE 32-Bit 2 Ser/1 Par/1 Game/VL-BUS
Acer/Mitsumi 101 Keyboard
$1399

FLOPPY DRIVE
PANASONIC 1 44Mb $47
PANASONIC 1.2Mb $57
MOUSE
LEADMAN MOUSE 3-BUTTON $10
MICROSOFT MOUSE (VER 20) $35
MISCELLANEOUS
HD/FD/CABLES & BRACKETS $5/ea
486 CPU FAN & HEATSINK $10
SUPER IDE & I/O PORTS, ISA BUS $17
SUPER IDE & I/O PORTS, VL-BUS $25
ZOLTRIX 14.4 FAX/MODEM/INT $95
CONNER 250Mb INT $210
CASE
MINI/DESKTOP CASE 230w $55
CD TOWER CASE 230W $70
MID-SIZE TOWER CASE 230w $80
FULL-SIZE TOWER CASE 230w $120
SUPER TOWER CASE 250w $140
MULTIMEDIA
SOUND BLASTER 16-BIT $136
PANASONIC CD-ROM 2X INT $185
SPECTRUM 12 +CD-ROM 1X-DRIVE $145
ATI STEREO FX 8 BIT 1Mb VIDEO CARD $125
SOUND BLASTER 2 0 COMP $65
w speaker microphone & cables
SPECIAL
PRO AUDIO SPECTRUM MULTIMEDIA w/ $350
PANASONIC 2X CD-ROM 4 CD-TITLES

Mon-Sat 9AM-7PM • All Prices are Cash & Carry • Volume discount available

X Files

extremely good and experienced but sometimes they're afraid of being aggressive They can't get away from their own world They have their circle of friends and crews that they work with and sometimes they're afraid to venture out."

In any case says Tkach the industry in general and Vancouver in particular are just booming "When I came here four years ago three movies were being done They're shooting 28 now I think three years from now there will be 50 being done. I think the environment is perfect Canada is a good country to shoot in I think the service industries are very strong the hotel industry is very strong you can get anything into Canada There isn't a lot of crime in this country, And there's an awful lot of desire out here more than anywhere else

"People come out here and they don't just come out and see the city And they're not just here to rape people of their talent they come here and say 'This is a nice place The people here are good And those in L.A go around saying, Oh geez I have to go to work today but here it's Wow I have to go to work today! It's so cool and they show up three hours before start time We have that here in Vancouver Visual effects business when we started people looked at us and said, 'Yeah right! The first year it was a little hard to sell the whole concept of SFX. Nowadays we can finish a batch of television commercials."

Tkach says that digital SFX are so advanced that in the film Forrest Gump Tom Hanks was visually melded with U.S Presidents, and the two legs of one of the leading characters were "chopped" into a stump In fact the actor who played the role had perfectly good legs "You think he was a real stump but he wasn't! [His legs] were chroma keyed out! People were so impressed by that! It lied to you! It cheated you! And that's what visual effects do They make you believe that it's real."

Addressing the future of visual special effects, "We're not that far away from doing life like images" Tkach predicts "The goal for us is to build perfect models. If we start with that we'll begin with perfect sets and if we start building perfect sets we're going to start building perfect environments And if we start perfect environments we'll get to perfect people"

Signposts for such a declaration include ground-breaking films as Terminator 2 Judgement Day, The Abyss and this year's True Lies Forrest Gump and StarGate Additional signposts include a weird rumor going around that Lucasfilm will redo the classic Star Wars (1977) with state-of-the-art special effects before a new trilogy is released in 1997

The state of the technology has also advanced now to a plateau where Tkach predicts "I think all those movies that everyone wants to do that costs too much to do? The ones that are a dream for a filmmaker or a producer? That couldn't be accomplished because it was too expensive? People are still going to come up with $300 million ideas, but transform it into a $100 million dollar movie because CGI is in place And you, the theater-goer, will see it as a $300 million movie I think computer graphics will allow the imagination go further than it ever has" ❑

MICRO-CHIP COMPUTERS

145 Traders Blvd. Unit #8, Mississauga, Ontario. L4Z 3L3
Tel: (905) 568-1028 Fax: (905) 568-1030

CONTROLLERS	
Super I/O FH/HD/2S/1P/1G	$23
VESA IDE w/2S/1P/1G	$45
I/O with 16550 One Serial Port	$28
IDE I/O 2S, 1P with 16550	$73

CD-ROM/MULTIMEDIA	
Discovery 16 (int)	$359
Edutainment 16 (int)	$599
Soundblaster Compatible	$69
Soundblaster 8 bit	$79
Panasonic dbl spd (int) w/ [illegible]	$209
Panasonic dbl spd w/Sound Card	$355

DRIVES, FDD/HDD	
5.25" 1.2M. FDD	$63
3.5" 1.44M FDD	$53
212 MB W D/SEAGATE	$245
270 MB QUANTUM	$265
340 MB MAXTOR	$289
420 MB CONNER	$309
540 MB MAXTOR	$375
730 MB QUANTUM	$449

FAX/MODEM	
Zoltrix 9600/2400 (int)/14.4	$49/$89
Quotel 14.4K (int)	$149
Calpak 14.4K (int)	$139
GVC 14.4K (int)	$149

KEYBOARDS	
Cherry 101 enhanced	$24
Keytronics 2000	$55
Keytronics 5000	$[illegible]

MONITORS	
14" SVGA 0.39DP	$269
14" SVGA 0.28DP (I)	$2[illegible]
14" SVGA 0.28DP (NI)	$309
15" SVGA 0.28DP (NI) L.R.	$449

MOTHER BOARDS	
386 DX40	$125
486 SLC33/64K	$145
486 SX33/128K, VLB	$249
486 DX33/128K, VLB	$3[illegible]
486 DX2-66/128K, VLB	$439

PRICES ARE CASH & CARRY/SUBJECT TO CHANGES WITHOUT NOTICE

UNICOM

1179 FINCH AVE. WEST UNIT #24
DOWNSVIEW ONT.
TEL:(416)667-8200
FAX:(416)667-0522

MOTHERBOARD	
PENTIUM 60/66 PCI W/256K CACHE	$349
PENTIUM 90/100/120PCI W/512K CACHE (MADE IN USA)	$569
GREEN VESA W/ SIS CHIP & 256K CACHE (FOR DX/DX2/DX4)	$139
386DX-40 ISA/OPTI CHIP 128K CACHE	$139
3 VESA 5 ISA OPTI CHIP/128K CACHE	$110
486DLC-40 CPU/2VESA/5 ISA/OPTI/128K CACHE (UPGRADEABLE TO 486DX,DX2-66)	$238
486 3ESIA/2VESA/3ISA/HINT CHIP 256K	$280

VIDEO CARD	
PCI VGA S3 W/1MB RAM	$160
ISA TRIDENT 8900D W 1MB	$84
VESA TRIDENT 9400CX W 1MB RAM	$90
VESA S3 805P TRUE 32-BIT W 1MB RAM	$115

CONTROLLER CARD	
ADAPTEC 1542CF ISA BUS MASTER	$270
ADAPTEC 1542CF KIT ISA BUS MASTER	$290
ADAPTEC 2842A KIT VL CONTROLLER	$295
ADAPTEC 2940 KIT PCI CONTROLLER	$390
ISA AIT0 IDE COMBO CARD/GOLDSTAR	$18
VESA AIT0 IDE COMBO CARD GOLDSTAR	$26
PCI IDE CONTROLLER CARD (ENHANCE 4HD)	$58

FLOPPY DRIVE	
PANASONIC 1.44MB	$45
PANASONIC 1.2MB	$59

HARD DRIVE	
MAXTOR 345 MB	$249
SEAGATE 450 MB	$279
SEAGATE 540 MB	$[illegible]

KEYBOARD	
KEYTRONIC KT 2000	$[illegible]
HONEYWELL KEYBOARD-SUH	$[illegible]
MITSUMI KEYBOARD	$18
DELUXE TACTILE KEYBOARD	$29

RAM MEMORY	
1 MB SIMM 30PIN 70NS	$52
4 MB SIMM 30PIN 70NS	$192
4 MB SIMM 72PIN 70NS	$189
8 MB SIMM 72PIN 70NS	$389
16 MB SIMM 72PIN 70NS	$699
32 MB SIMM 72PIN 70NS	$1349

ETHERNET CARD	
INET 2000 16BIT/COAX+TWIST PAIR JUMPERLESS	$75

MONITOR	
MEG 14"SVGA .39DP INTERLACED	$259
MEG 14"SVGA .28/NI GREEN	$319
MEG 15"SVGA .28/NI/GREEN	$479

MULTIMEDIA&MODEM	
BOCA 14.4 S.R INTERNAL	$139
MITSUMI 2X CD ROM W/CONTROLER	$189
THE 7TH GUEST CD(2CDS)	$35
SPEAKER E4100W/LP-80W	$99/$89

SOFEWARE	
MS.J MOUSE V2.0A	$45
MS-DOS V6.22	$55
MS WIN V3.11	$65

WE ARE ALSO SPECIALIZED ON UPGRADES

SUPER PENTIUM 90MHZ
2VISA,5ISA,4PCI, W/512K CACH
90/100/120MHZ,MADE IN USA
$3,969

INTEL PENTIUM 90MHZ CPU
64BIT WIDE-DATA TO 128MB DRAM
8MB HIGH SPEED 72-PIN RAM
ATI PCI MARCH64 W/2MB RAM
ADAPTEC PCI FAST SCSI-2940 HD CARD
800MB SCSI HIGH SPEED HD
PANASONIC 1.44MB FLOOP DRIVE
CTS-15" NI/.28/GREEN/FLAT SVGA
MID TOWER CASE W/LED
MS.J MOUSE V2.0
OS TEST (MS-DOS,WINDOWS, WINDOWS NT,OS/2,NOVELL,UNIX, XENIX)
TOP QUAILITY & TROUBLE FREE

NEW ARRIVAL
SUPER PENTIUM PCI/VESA/ISA
90/100/120 MHZ MOTHERBOARD
(MAKE IN USA)
+
ADAPTEC PCI SCSI-2940

486DX2-66(128K CACHE)
VESA-LB,32BIT,UPGRADABLE
TO DX4-100
$1,399

486DLC-40(128K CACHE)
VESA-LB,32BIT,UPGRADABLE
TO DX,DX2-66
$1,249

PENTIUM 60 VIP SYSTEM
2VESA 5ISA 3PCI W/256K CACHE MB
8MB 72PIN HIGH SPEED RAM
PCI ENCHANCE IDE 4HD CONTRIO CARD
PCI S3-864 VIDEO CARD W/1MB(UP TO 2MB)
540 MB HARD DRIVE $2,349

ALL SYSTEM INCLUDE
4MB HIGH SPEED RAM
S3 VL-BUS TURE 32BIT VIDEO W/1MB(UP 2MB)
VL-BUS IDE/IO W/2S/1P/1G
420MB HARD DRIVE
PANASONIC 1.44 FLOOP DRIVE
MINI TOWER CASE W/LED
14" SVGA .28/NI MONITOR
FREE 3-BUTTOM MOUSE&PAD

CD-ROM SOFTWARES HOT TITLES SPECIALS!

Hundreds of CD Titles Available In Special Prices

Mon.-Fri. 9:30-5:00
Chelsea Square
Suite 109, 7225 Woodbine Ave.,
Markham, Ont.
Tel: (905) 470-7687
Fax: (905) 470-1436

Qcad 2.0
by Microcad

PCB DESIGN SOFTWARE WITH PROFESSIONAL AUTOROUTER
- FROM $ 250 TO $ 25 000
- FREE PRESENTATIONS
- FREE DEMO VERSIONS

PCB DESIGN & MANUFACTURE

MICROCAD STORE 33 ROY'S SQUARE
BETWEEN 21 AND 23 BLOOR ST EAST
MONDAY TO SATURDAY 11 AM - 7 PM
TEL (416) 923-8161 FAX (416) 923-8467

PRE CHRISTMAS SALES

486DX33 $1,289
486DX266 $1,399

486 VLB Motherboard 128K
Intel CPU
4MB RAM
1.44 Floppy Drive
420MB HardDrive
VLB Video Card 1MB
IDE Controller with 2S, 1P, 1G
Mini-tower Case
14" 0.28 SVGA
101 Keyboard
MS Compatible Mouse & pad

New! $399
Creative Labs Digital Schoolhouse
Sound Blaster 16 Soundcard
Double Speed CD-ROM
20 Titles included

$89
14.4 Internal fax/modem
with system purchase

** All prices are 3.5% cash discounted & subject to change without notice

GigaTrend Computers & Electronics Inc.
220 Royal Crest Court, Unit 13A, Markham, Ontario
1870 Kingston Rd. Unit 3A, Pickering, Ont.
Toll-free : 1-800-3?7-GIGA Fax: (905) 686-7413

都美誌
電腦軟件
中文光碟專門店
Chinese CD Shop
飲水思源
中國針灸
Upgrade 請進
HEY! SERVICE HERE!
I just want a 1G hard drive.
I want 16 MByte RAM
Chinese CD Menu

TOMIGI Tel:(416)299 1408 Fax:(416)299 8326
2250 Midland Ave, Unit19, Scarborough, Ontario, Canada M1P 4R9

Designed by IH Concept

online

Mosaic Communications Offers Internet Browser for Free

Mosaic Communications Corporation is offering its new Mosaic Netscape Internet browser program free to users via the Internet. Founded in April of this year by one of the founders of Silicon Graphics and by the creator of the original Mosaic program, Mosaic Netscape is a speedy, enhanced alternative to regular NCSA Mosaic.

Keeping with tradition, Mosaic Communications is offering this Internet software free of charge, believing their easy-to-use program will help spur the growth in the numbers of users on the Internet and ultimately provide a larger customer-base for their commercial products. Versions of Mosaic Netscape are available for Microsoft Windows, the Macintosh, and X Window System operating systems.

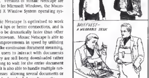
Mosaic Netscape is optimized to work using 14.4 bps or better connections, and is claimed to be dramatically faster than other Internet browsers. Mosaic Netscape is able to achieve improvements in speed by utilizing features like continuous document streaming, enabling users to interact with documents while they are still being downloaded rather than having to wait for the entire document to load. It is also able to handle multiple network accesses, allowing several documents or images to be downloaded simultaneously.

The current version of Mosaic Netscape is a public beta build of the program, letting users provide feedback on its features and functionality. The final version, due out sometime in November, will also be available for free. It is expected to have extra security features like encryption and server authentication built in.

Mosaic Netscape can be obtained via anonymous FTP from FTP.MCOM.COM. — KS-R

Contact: Mosaic Communications
SALES@MCOM.COM

Sightings Steven M. Johnson



In spite of a look that suggests weight gain, wearers of Briefvests by SoftDesk of Vermont enjoy the convenience of a variety of office tools, a curved, fold-down lapdesk, and a notebook computer.

THE COMPUTER JEWEL

AN ANTIQUE MEMORY CHIP FASHIONED FOR YOU!

This surviving relic of computings distant past is a genuine computer chip. Beautifully set and Handcrafted into this Unique and Timeless Limited-Edition jewelry offering.

An **EXCITING** conversation piece! A **GREAT** Christmas Gift Idea!

Stick Pin (Gold Plate)	$35.00
Stick Pin (14kt gold)	$125.00
Brooch (14kt gold)	$199.00
Tie Tac/Lapel Pin (14kt gold)	$95.00
Pendant (14kt gold)*	$350.00

All items come in an attractive jewelry case with explanatory pamphlet.
Payment by Certified Check or Money Order
Ontario Residents add 15% tax (PST+GST)
Orders over $200 delivered by courier free of charge.
All others add $8.00 Postage & Handling
Please allow two weeks for shipment of all orders.

Inquiries (905) 727-6210
Fax 7am-7pm / Voice 7pm-11pm)

CHIP: 256 x 8 EPROM (Circa 1973)
White Ceramic Pkg/Gold
Plated Leads Dazzling Silicon
Circuit Beautifully displayed beneath
clear Quartz window

SILICON JEWELRY
5403 Sisters Road, Vandorf, Ontario, Canada. L0H 1G0

Cashless in Toronto

BY JAMES MACFARLANE

Our initial reaction to this piece was that it was a little off-topic but it will certainly affect more people than modems or the Internet, contrary to the current hypology — The Editors

Is a cashless society a good idea? Well, not yet.

Due to a "computer glitch" $1 900 of my money went missing one day It was the weekend I needed some money and my bank account was useless I felt like an unperson For once I had to re-evaluate my role as a technophile

It was Friday afternoon and I was buying a bed at a local store They had a debit card machine from the Bank of Montreal which saved me a trip to the bank to take out $950. Debit card machines are a great idea. For those of us who don't want to pay with a credit card, they save a lot of time and hassle

Places that never previously accepted credit cards like grocery stores, are now equipped with debit card machines Here's how they work. when you want to pay with your bank access card, the retailer swipes the card through the reader You get a small keypad resembling the one in a full sized bank machine You are shown the transaction amount on a LCD display then you enter your PIN number and OK the transaction.

The money comes right out of your account (along with a small transaction fee) and is deposited right into the retailer's account. The procedure is much simpler than what's required to process a credit card transaction both for the user and for the retailer

But when I was making my purchase that Friday afternoon something went wrong After keying on my OK the terminal came up with a TIMEOUT ERROR. No big deal said the retailer and he tries it again This time the terminal printed out a receipt with the word VOID written across the middle of it Something must be wrong in the network the retailer said so I was off to the nearest branch of the Toronto Dominion bank to take out cash.

Everything was fine I got my bed paid cash and aside from the inconvenience of going to my branch everyone was happy until the next day

I went to take out some money for the weekend on Saturday evening and the Green Machine refused to cooperate. It said I had an overdraft balance of $353 Strange, I thought since I had over $1 500 in the bank on Friday

Then an idea struck me so I went home and pulled out all my receipts My balance was exactly $1,900 short, exactly double the price of the bed and exactly the sum of the two "failed" debit card transactions

The bank was closed the store was closed and I had about three dollars to my no-longer electronic bank enthusiast name Aside from considering where I could buy some very big power tools a front-end loader and explosives on a Saturday night I felt completely helpless Here I was, a digital nobody a virtual electronic vagrant Somewhere in cyberspace was $1 900 of my money and there was no way for me to get to it.

After being grumpy all weekend, I managed to make it to the retailer's store and explain the problem He checked his transaction record and nowhere did it show two transactions of $950 going into his debit card account We called The Bank of Montreal (his bank) and after about 20 minutes of bouncing from person to person we ended up in a dead end

Doesn't this remind you of the tech support pass-the-buck game that so many companies play in the computer industry "Nope, our software works It's the fault of Windows" "No, Windows is fine but maybe there's a hardware incompatibility blah blah blah. The bank was playing the same game

I went to my bank got a statement print out took it to the retailer and showed him the missing money with his name on it We talked to his bank again They said I'd have to get a hold of some inter bank processing centre manager at TD Bank and tell the whole story over again. "Wait a minute your machine screwed up my bank account Why should I have to do all the legwork to solve your problems I've got better things to do with my day!"

The person at the Bank of Montreal said that one of the transactions was in the retailer's account and that he could refund it using the debit card machine The other one I'd have to talk to my bank about So the poor retailer, who has also lost faith in the Canadian banking system passes $950 back into my account. I'm still $950 in the hole but at least I can eat.

Later the retailer phones me and tells me that the bank screwed up and the money had not been in his account and that he had refunded me $950 that he never received from me At this point I was livid so I marched back to my bank and was determined I wasn't going to leave the building until the problem was solved

I was shocked when I got to my branch I foamed at the mouth for a minute at Christine Riehl of TD bank, then she sighed and said "This has been happening an awful lot in the last few weeks only with Bank of Montreal

➤

ROSE MEDIA BBS

Your High-Speed Access to the Information Super Highway

Set Your Modem to 8-N-1 and call

416-733-2285

Voice Line: 905-731-8805

Copywell

375/393 University Avenue
south of Dundas
599-5899
Fax 599-5905

185 College Street
near McCaul
979-2942
Fax 979-1835

86 Gerrard Street East
near Church
971-6292
Fax 971-6292

1999 Leslie Street
Hwy 401 & Leslie, North York
444-8738
Fax 444-1663

4699 Keele Street, #7
Downsview, Ont
665-YORK (9675)
Fax 665-5680

100% Canadian owned

The Xerox DocuTech
NEW STATE OF THE ART
DIGITAL PRINTER/COPIER

Volume Discounts Corporate Accounts

FAST ESTIMATES
CORPORATE PRINTING
HIGH RESOLUTION COPYING
COLOUR LASER COPYING

(11x17) NEWSLETTERS
REPORTS/MANUALS
RESUMES
PRESENTATIONS

NOW AVAILABLE CANON FIERY RIP - DIRECT COLOUR OUTPUT FROM FLOPPY

ELECTRONIC PUBLISHING GRAPHIC DESIGN OCR SCANNING
IMAGE SCANNING PAGE LAYOUT COLOUR OUTPUT 400 DPI
BLACK & WHITE OUTPUT 1000 DPI OUTPUT FROM YOUR DISK

Electronic Publishing Services available at the University Location

Print on Demand
We'll output directly from floppy

For Printing Copying or Franchising information Please call 1 800-COPYWELL (267-9935)

MODAX
PERFORMANCE COMPUTER SYSTEMS

MONTHLY SPECIALS

SX25 VLB $1479.00
DX 33 VLB $1,579.00
DX 250 VLB $1,629.00
DX 266 VLB $1,709.00

SYSTEMS INCLUDE

- ✓ 486 VLB 256K CACHE ZIFF SOCKET MOTHER BOARD (OR INTEL PENTIUM PCI 256K CACHE ATA IDE & I/O MOTHERBOARD)
- ✓ INTEL PGA (DX) ENHANCED OR PENTIUM PROCESSOR
- ✓ 4 MB RAM (8MB PENTIUM)
- ✓ 1.44 PANASONIC FDD
- ✓ VLB IDE I/O CARD 2S 1P 1G (ON 486)
- ✓ 428 MB SEAGATE ATA 13MS 128K HARD DRIVE
- ✓ SVGA NI .28 DP MONITOR
- ✓ VLB VIDEO CARD W/ 1MB RAM EXP 2MB
- ✓ MINI TOWER CASE WITH 230 PS
- ✓ 101 ENHANCED KEYBOARD
- ✓ MICROSOFT 2 BUTTON MOUSE
- ✓ DOS 6.22
- ✓ WINDOWS 3.11

UPGRADES

- ✓ 8 MB RAM $201
- ✓ 16 MB RAM $446
- ✓ SEAGATE 545 MB HD $82
- ✓ VLB IDE ATA 2.88 FDD 16550 2S 1P 1G $52
- ✓ 2.88 3.5 FDD $59
- ✓ 15" NI SVGA $142
- ✓ 17" NI SVGA $505
- ✓ PANASONIC DBL SPEED CD ROM $199
- ✓ SOUND BLASTER 16 BIT AUDIO CARD $131
- ✓ BROTHER LASER HL641 1MB 300DPI $619

HIGH QUALITY HARDWARE AND OUTSTANDING SERVICE

1-800-998-9791

- ✓ TWO YEAR WARRANTY
- ✓ OPTIONAL ON SITE SERVICE PLAN
- ✓ 24 HR STAFFED TELEPHONE SUPPORT
- ✓ 24 HR SUPPORT BBS
- ✓ GETTING STARTED OWNERS MANUAL
- ✓ QUALITY NAME BRAND COMPONENTS

intel inside

A division of Modax Image & Data Inc. Financing available. Prices are subject to change without notice. All brand and product names are trademarks of their

BUSINESS INTELLIGENCE
BBS (416) 502-1040 800-215-7819
Best [illegible] DOS software [illegible]

IPG INTERNATIONAL PROGRAMMERS GUILD
PROFESSIONAL CERTIFICATION & RECOGNITION FOR PROGRAMMERS
Call 905-824-7947
CANADIAN CHAPTER : 3016 Runnymede Row Mississauga ON L5N 4S3

Desk Jet/BubbleJet Ink Refills 5/$49.!!

Faster drying less smudgy printer safety guaranteed Canon BJ5, 10e(x), 20, 200, fax, Apple S/W, Brother IBM 4070, or HP 51608a Olivetti JP150/350 Colours are available Canon BJ 800 Black 2/$35. clr 2/$42.

RECYCLED
Laser Cartridges
HP II/III/IIP $49.
HP IV $89.
HP 4P/4L $69.
Epson Actionlaser $129

IMAGE CONTROL
ETOBICOKE INC
62 Mimico Ave
416-251 3370
Delivery Available

NORLAND CONSULTING
TORONTO AREA CONTRACTS

DB2/SAS P/A S (6)	$40-50/hr
PBX SWITCH SUPPORT	$40/hr
LAN/WAN SUPPORT	$36-50/hr
OOA/OOD/OOP P/A	$50-60/hr
AS400/SYNON P/A s	$40-50/hr
AS400/SILVERUN P/A	$45/hr
AS400/COBOL, P/A	$35-45/hr
AS400/RPG400 CL400	$40/hr+
C/SQL/UNIX, PGMR'S	$35/hr+
TANDEM/TAL, P/A'S	$40-50/hr
BASE24/POS/ATM	$40-50/hr
SAP R2 or R3 P/A S,	$50/hr+
VAX/VMS/ORACLE,	$40-$45/hr
C++/WINDOWS,	$35-45/hr
C++/SMALL TALK,	$45-55/hr
HP/SPEEDWARE,	$35-50/hr
HP/POWERHOUSE,	$45/hr+
SYBASE DBA/UNIX	$50-60/hr

Please Fax Resume to
416-512 7781
or mail to:
NORLAND CONSULTING
210 SPRING GARDEN AVE
NORTH YORK, ONT M2N 3G8

Offices in Montreal & Toronto

online

debit card machines. The problem is the debit card system is so new that we don't even have the proper forms to report these kinds of problems."

First, I was very happy to actually find someone who knew what they were talking about, secondly I had to pick my jaw up off the floor when I discovered how incredibly shoddy the debit card system must really be.

How could something like this happen? Here are the banks, probably the most electronically wired organizations on the planet with billions of dollars of computer technology, and they lost my $950! I just don t get it.

The thing that really shocked me was that she said that she d put a trace on the transaction and once she got verification that what I said was correct that the bank would put the money into my account at their expense until the whole thing was sorted out. Whoa! She did as she said and even went to the trouble of crediting me for the transaction fees and overdraft interest for the whole ordeal. I was impressed. Cheers to Christine Riehl at TD Bank.

The point of all this is that computers don't have "glitches", organizations do. The poor clerk wasn't trained properly and did not have the knowledge base required to solve this problem - they didn t even give him a phone number of someone who could help in these instances. The Bank of Montreal s bureaucracy prevented him from solving this problem quickly and efficiently. The designers of the debit card network failed in that there was an obvious bug in their system and not only that but there was no way for my bank to easily detect and solve the problem.

You can have all the technology on the planet but what it really comes down to is people lines of communication and good, solid design. As more and more of our society becomes cashless in one form or another there are going to be more and more problems. How many other people got nicked by these debit card machines? How many of them were for smaller amounts and never noticed?

It's time to sit down and think where we're headed. Real cash doesn't work in an electronic universe, electronic cash is too "virtual", and therefore an easy victim to fraud, and systemic errors. I don t know about you, but I think I m going to keep my money in a shoebox. ❑

Internet For All In Saskatchewan

NB — SaskTel, the provincially owned telephone company serving the province, has announced plans to make access to the Internet available from every telephone in its territory by early next year.

The inauguration of SaskTel's SaskNet service will make Saskatchewan the second Canadian province to provide universal Internet access to telephone subscribers. The first was New Brunswick.

Rod Podbielski a spokesman for SaskTel, told Newsbytes that final rates for the SaskNet service have not been set yet, but the plan is to charge about $20 per month, with some amount of connect time included at no extra charge. The service will provide full access to all Internet services, he said, and SaskNet's fee will also include an Internet navigational package called Pipeline.

"Internet is not necessarily the easiest thing to find your way around ' Podbielski noted so SaskTel wants to provide a navigational package to help subscribers deal with the vast network.

SaskTel said it will spend about $1 2 million to upgrade and expand existing Internet access facilities. The connection to the Internet will be made through the University of Saskatchewan, in Saskatoon, and the University of Regina.

In announcing the decision Ed Tchorzewski, the provincial minister responsible for SaskTel, noted that one popular concern about new information services is that people in rural and remote areas may be left out. The move to provide universal Internet access in Saskatchewan — a sparsely populated province whose economy depends heavily on agriculture — seems a significant step to avoid that risk. ❑

Looking For A Career In Computers?

- Computer Programming/Systems Analysis
- PC Support/LAN Administration
- Programming Upgrade

If you are seriously looking for a career change and two years is too long to wait – we can make it happen in five months. Attend our **Information Seminar.** *Discover why our unique program and Placement service works.*

Phone **The Institute** *at* **(416) 499-9522** *to register for our no-obligation* **Information Seminar Wednesday, 6.30 p.m.**

The Institute for Computer Studies
Excellence in Education and Career Development

The Honeywell Centre, 155 Gordon Baker Road, Suite 402, North York, Ontario M2H 3N5

MDG 486DXII/66 AMD $ 1195 INTEL $1245

FULLY LOADED INTEL PENTIUM 90 MHZ $ 2199 GET THE BEST
ABSOLUTELY THE LOWEST PRICES ON THIS CONTINENT

Limit one system per family, three per business place. While quantities last. Price is cash discounted add 3% for credit cards or terms. On spot financing leasing available. No dealers. Pric [illegible]

486slcii/50
$ 1089 or $ 45 /mo

486sx/33
$ SOLD OUT

486dx/33
$ 1099 or $ 46 /mo

486dx40
$ 1149 or $ 54 /mo

486dxii50
$ 1169 or $ 59/mo

MDG will beat any price on a system
by $ 30 or it is yours free.

=> 486 Mother board with 3 vesa local bus slots p24 socket, DX4 upgradable, 3.3 and 5v, green, 72 pin memory banks
The fastest and moust reliable mother board the money can buy
=> 420 MB Seagate or Conner hard drive IDE 12 ms , 256 hard drive cache
=> 4 MB 72 pin 1x36 memory 70 ns exp to 128 MB
=> 32 bit vesa ide controller 2s/1p/1g ports
=> 1.44 floppy drive Fujitsu or Toshiba
=> 1mb Cirrus Logic or Trident svga local bus card
=> 14" Svga Daytek monitor 1024x768 resolution
=>Elegant mmy tower case with 230 w p/s
=> Enhanced 101 keyboard
=>Microsoft comp.-mouse 3b high resolution

Full multimedia upgarde .... $ 249.00
2x CD rom (Panasonic or Philips)
16 bit sound card , speakers, microphone headphones,
ONE YEAR PARTS, THREE YEARS LABOUR WARRANTY

486dxii66
$ 1195 or $ 52/mo

486dx4/100
$ 1899 or $ 69/mo

pentium 60
$ 1699 or $ 65 /mo

pentium 66
$ 1899 or $ 74/mo

pentium 90
$ 2199 or $ 85/mo

System could be modified to meet your requirements , please ask about different upgrades available

Upgrade Specials : Done while you WAIT

MOTHERBOARDS	HARDDRIVES	VGA CARDS	MONITORS	MODEMS	OTHER
286 AT ...... $ 10	420MB ... $ 269	512 SVGA .$ 55	39dp SVGA. $ 235	96/24 ... $ 29	DOS .... $ 54
386SX. ... $ 45	546MB ... $ 339	1MB SVGA. $ 89	28 NI DAY. $ 315	14 4 F M $ 89	WIN DOWS. $ 54
486DLC33.....$165	1GB IDE . . $ 675	1MB LB . .. $ 94	15" NI .28 DAY$ 465	28 8F M..$ 195	K BOARD... $ 19
486DX/33. ... $265	877MB SCSI$ 745	2MB LB ......$ 175	17" KDS ..... $ 845	14.4 EXT$ 165	LOGITEC M.$29
486DX/40. .. $295	1GB SCSI ..$ 895	ATI LB + . .$ 185	17" DAYTEK. .$ 849	28.8 EXT $ 245	NE2000 AD $ 89
486DX/66. .. $395	1.9GB SCSI $1498	ATI LB 2MB $ 265	MAG 17" .. $ 995	96 PCMC$195	1542 adap $295
Pentium 90 $1485	250 MB 2 5" $ 345	ATI 64 BIT $ 445	MAG 21" .... $ 1795	14 4 PCM$245	2842 adap $375

UPGRADE YOUR OLD 486DX/33 TO A BRAND NEW 486DXII66 FOR ONLY $ 145
UPGRADE YOUR OLD 486DXII/66 TO A BRAND NEW 486DX/100 FOR ONLY $ 495

EXCELENT DEALS ON ALL KINDS OF MEMORY UPGRADES , WE ARE NEVER OUT OF STOCK ON ANY CAPACITY OF 30 OR 72 PIN RAM

PENTIUM 60 , 66 , 90 AVAILABLE AT ANY TIME NO WAITING.

MDG WILL BEAT ANY ADVERTISED PRICE FOR A SYSTEM BY $30 OR IT IS FREE or $ 100 from any store within 1 5 mile.
Corporate and Government PO. welcomed . On site service available.
GREAT DEALS ON NETWORK INSTALLATIONS AND SERVICE CONTRACTS Shipping Canada Wide
MDG, COMPUTER PLACE WHERE QUALITY AND SERVICE COUNTS

MDG COMPUTERS CANADA INC.
MONDAY FRIDAY 9-7
SATURDAY 10-6
415 HORNER AVE. #2
ETOBICOKE, ONT. M8W 4W3
TEL 416-255-9343
FAX 416-255-8672
E-Mail. mdg@io.org

The Global Library

Librarians Surf Cyber Space

BY JEAN READ

Behind the walls of your local library a revolution is taking place — an electronic revolution Librarians are becoming information specialists as they surf the super highway in an attempt to stay abreast of new technologies

Libraries across Canada are at different stages in the electronic revolution but some, like the University of Manitoba can already be accessed and searched electronically Databases can be accessed, downloaded, and printed, and if you have a user i.d. you can also reserve a book all without stepping inside the library doors.

For many university libraries, the next major innovation will be an electronic interlibrary loan form which will allow a user to search a library in another city and request the book electronically

This electronic revolution is not without issues and concerns In an International Videoconference held Oct 4 and sponsored by the Online Computer Library Centre Inc 18 000 library staff had the opportunity to raise questions. The OCLC has its headquarters in Dublin Ohio, with regional networks throughout the United States and international affiliates scattered across the globe

The Videoconference's aim was to provide a forum to discuss the professional implications of the next stage of the electronic library in education resource sharing, electronic publishing and librarianship in general.

Will you be able to satisfy a sudden urge to read *War and Peace* by switching on your home computer zipping through a library catalogue, downloading, and printing a copy of the book on your home printer? No! There are still copyright restrictions But what you can download is increasing Elsevier Science Publications have just announced that all their titles will be distributed now in an electronic form

The image of the library as a physical place where books are stored is changing The walls are expanding and patrons can with a few keystrokes explore the shelves of libraries in other cities Even the Library of Congress is going to a digital format

One issue raised during the Videoconference was how to catalogue precisely to ensure that a user in one city is certain that a specific book in another city library contains the required information. If you surfed the library of the World Bank in Washington from a computer in Regina you would discover that their solution to this problem is to list brief abstracts of available papers

Another issue was language As libraries interact more globally language and standardized methods become a concern Electronic information implies recent information but what do libraries do with their older, traditional sources of information? Funding for libraries was also a major concern and Christine Deschamps director of the Library of the University of Paris told the conference that in France, university libraries are funded by the government

Although school children are becoming computer literate for many of the older population the local library is their first experience with a microcomputer A survey in 1992 showed that in 80 percent of libraries that served over 100 000 people, services available included a CD ROM microcomputer and database access, while 60 percent had a microcomputer for public use

Canadian Projects

York University Libraries in Toronto report that they are in the second year of a three-year plan to move from Yorkline a mainframe library system to Yorkline+, an open system with client/server architecture. The graphical user interface of Yorkline+ will connect users with York's library catalogue, journal indexes, text and image files, and information gateways. Use of Yorkline from outside the Libraries has increased by 30 per cent in each of the last two years.

The University of Saskatchewan has just introduced U-Search It provides access to (a) Innovative catalogue as well as (b) tape bibliographic databases and locally created databases formerly on Infoaccess service; (c) networked CD-ROM databases and (d) gateways with other services such as gophers, limited Internet access via Hytelnet, electronic journals and so on

U Search is built with HTML pages and so is accessible using Mosaic Lynx and other Web browsers. During the coming year they will add electronic forms for interlibrary loan requests reference questions and book purchase suggestions As SaskTel, in common with other Western provinces, will take over Sask#Net the province's Internet network in 1995 most Saskatchewan residents will be able to get at the Internet in a reasonably distance-insensitive cost

Dr F Winter the Director of the University of Saskatchewan Library, says that the hardware software and networking environments are all in place and can embrace new technologieswith relative affordability The hardest part is making electronic services seem a logical whole to users. The expertise of librarians in explaining how users approached such systems as part of their search for information was a major part in designing a successful system ❑

ComputerLink Offers Free Global Chat

ComputerLink has added a new international teleconference site This telenet site is free with telenet access and features all the services of IRC chat while preserving the friendlier interface of a major BBS For access, telenet to chat.compulink.com. 4000 and create a name and password.

ComputerLink has also added the ComputerLink Multi User-Dungeon game, "Realms of Despair" (RoD) RoD is a fantasy role-playing game with RIP graphical support and is offered free with telenet access For access, telenet to mud.compulink.com 9000 — RC

Contact: ComputerLink at 416-233-7150 or via modem at 416-233-5410

ONLINE SPORTS
- 24 Hour News Wire Via Satellite
- Fantasy Sport's Leagues
- Stats, Injury Reports, Transactions
- Fido, UseNet, GamblersNet, Nanet & More

416-928-3339

the Wire
Santa's WWW & E-Mail Specialist!
GRAPHICALLY INTERFACED INTERNET From 44¢/hr.
Give Internet to your Friends and Relatives
(416) 214-WIRE

WORTH! EVERY! BYTE!
The Ultimate in B.B.S.-ING
YOUR #1 CONNECTION TO THE
W.E.B.
* Free Access *
24 Hrs Call (905) 788-1077

Internet *from Toronto's newest network connection !*
Win-Surf on the internet with our UNIX based system providing
E-Mail, Chat, FTP, Telnet, SLIP, PPP WWW NEWS. Games and more.
Here's just a sample of what we'll be offering our members
Bonus off-hours rates
Thousands of files available,
Prizes. Voice line support,
available on a separate
For business we offer
Graphical access via Mosaic and X-11,
Dial up connections to 28 8 baud
Online storage and programming tools
system, hardware co-op and more to come
firewall protection on a separate server
To find out more about business and personal connections
from as low as $.25 per hour and the other custom services we provide
call
TCN Systems Voice line - (905)-508-4915 (416)-359-0921

Your ONRAMP™ to the
INTERNET
For Toronto area customers who need dependable and easy Internet access
- direct Internet access for your PC (SLIP or PPP)
- our easy-to-use and install Connect software for Windows™
- your own international Internet e-mail address
- easy access to powerful Internet software (e-mail, Mosaic ...)

For our business customers we also offer
- WWW authoring and hosting for your products and services
- full-time Internet connections for the PCs on your lan

ONRAMP Network Services Inc (800) 613-0413 or sales@onramp.ca
or see our WWW home page http://www.onramp.ca/

EDUCATION

Shaping Cyberspace Into Human Space

BY BARRY SHELL

The Internet is not a highway. "The Internet is more like a community," says Linda Harasim. "Anyway it's not a road going somewhere. That's why people are having trouble understanding it. It's a place." The first thing everyone types when they get connected is, "I'm here!"

Harasim is the principal investigator in a $1 million project to develop a Virtual University sponsored by CANARIE (Canadian Network for the Advancement of Research in Industry and Education). The Communications professor at Simon Fraser University in Burnaby, B.C. intends to build her virtual university on a foundation of text-based computer conferencing.

Anyone who has ever sent or received e-mail (electronic mail) has already had a taste of online computer conferencing. People "join" a conferencing system by logging on via the Internet. Anyone can start a new discussion, or respond to one that's already happening, and participants can send private messages to each other, too. There may be three discussions or hundreds, 10 participants or thousands. When you join a group you see what others have been talking about and you have the option of typing in your two-cents worth. The computer keeps track of who said what and when.

➤

Tips on Shaping A Virtual Learning Space

The key is to facilitate collaborative learning:

- Don't Lecture. Long but coherent postings often produce silence. Use short open-ended comments that invite response.
- Be Clear About Expectations. Define what students must do for the whole course, for each module, each assignment and each time period.
- Be Flexible And Patient. Guide the conversation but don't dominate. Remember curriculum will be affected by the diversity of opinions from different world views. Be open to change and acceptance of new views on various topics.
- Be Responsive. Especially at the beginning, ensure that every student's comment gets a response. If no one else replies, either respond yourself by a private message or by mentioning the original author's comments in one of yours.
- Don't Overload. Contribute no more than one long comment a day, or less if students are active. Several short notes are better than one long one.
- Monitor and Prompt. Read the system status report frequently. Encourage those falling behind with private email. Prompt those who are reading but not writing. If no response after one week, telephone and discuss problem.
- Encourage Group Work. Give assignments to small groups. If a class is large, divide it into two or more discussion groups. Assign individuals within groups the role of "teacher" for small portions of the course.
- Teach Netiquette. Explain how to avoid insulting others and straying off the course topic.
- Write Weaving Comments: Summarize and focus the discussion with comments that weave together various threads of interest.
- Do Electronic Housekeeping. Move or delete items that do not belong to the discussion. Organize and model the use of keywords and references to show relationships.
- Establish Norms and Set Rules. Give credit for good participation.
- Close and Purge in Stages. Moribund discussions need to be closed slowly, giving members a chance to save messages.

(From Learning Networks: A Field Guide to Teaching and Learning Online by L. Harasim, R. Hiltz, L. Teles and M. Turoff, MIT Press 1995.)

WE SPECIALIZE IN HARDWARE & SOFTWARE SALE...
EVERYTHING FOR YOUR COMPUTER NEED

Software
中英文軟件
- Business
- Accounting
- Education
- Desktop Publishing
- Entertainment

Hardware
486DX2-66 $1299
- 420 Mb HD
- VLB Motherboard
- 4 Mb Fast RAM
- 1Mb SVGA Card
- 14" SVGA NI Monitor
- I/O Card w/ 2S/1P/1G
- Minitower case
- 101 Enhanced Keyboard
- Free mouse

Hard Drive Sale
540 Mb $349
420 Mb $279
1.05 Gb SCSI $858

Memory Sale
SIMM RAM 72pin - 4Mb $179
SIMM RAM 30pin - 1Mb $ 49

Come for an inhouse FULL DEMO before U buy!
RAINBOW COMPUTER SYSTEMS
2466 Eglinton Ave. E., Unit 5
Scarborough, Ontario M1K 5J8
Tel: (416) 266-6133 Fax: (416) 266-2744
KENNEDY RAINBOW MIDLAND EGLINTON AVE. E

OptiMicro Technologies Inc.
IPC SYSTEMS "Best Warranty in The Industry"
1 Year On-site Warranty
3 Year Depot Warranty
The Obvious Choice
IPC Select Series
IPC CD/FX50V $2400.00
IPC CD/FX-66V $2894.00
NEW LOW PRICES
3 YEARS
Authorized Reseller for IPC AST IBM NOVELL
Please Call for the Latest Pricing
The Easiest Way to Add a Hard Drive
Presenting pPhD
☆ Perfect for laptops and portables
☆ Easy setup, gives extra storage in three minutes
☆ Attaches INSTANTLY to ANY PC and laptop parallel port
☆ Use the same programs and data at home, office, and clients
☆ Protects sensitive programs and data by carrying them along with you
☆ Comes with carrying case, software, cables and 1 year warranty
Networking Solutions
Novell CNE on staff
On-site service
Service contract available
* LANs * Remote Access * LAN to LAN Connections *
☑ NOVELL LAN Starter Kit ONLY $249.
Everything you need to connect two computers
☑ LAN Turnkey System (for 5 users) ONLY $5999.
1 x Server: 486DX2/66MHz, 1.44 Mb FD, 540Mb HD, Network Card, monitor
5 x Workstations: 486/33MHz, 1.44Mb FD, Network Card, SVGA monitor
Novell Netware 3.12 (5 user version)
All cables, connectors and installation included*
☑ Other network configurations available.
Microsoft SOLUTION PROVIDER
Novell Certified NetWare Engineer
7170 Warden Ave., Unit 15, Markham, Ontario L3R 8B5 Tel: (905) 470-7010 Fax: (905) 470-8975 Just N. of Steeles

ROCKET COMPUTER SYSTEM

LASER PRINTER	
HP 4L 300dpi, 4ppm, 1mb	$890
HP 4P 600dpi, 4ppm, 2mb	$1320
HP 4MP 600dpi, 4ppm, 6mb, PS	$1895
HP 4 600dpi, 4ppm, 2mb	$1670
HP 4+ 600dpi, 12ppm, 2mb	$1935
Okidata OL400e 300dpi, 512K	$650
Digital 1152 300dpi, 4ppm, 2mb	$876
Epson 1600 600dpi, 4ppm, 2mb	$1399

BUBBLE JET PRINTER	
HP 540 B/W 600dpi (Color Option)	$390
Color Kit for HP 540	$60
HP 560C Color, 600dpi	$678
Canon BJ200e 360dpi	$340
Canon BJC4000 Color, 720dpi	$719
Epson stylus Color 720dpi	$790

** NEW OS/2 Ver 3.0 $120
(w/ additional $25.00 Rebate)

MONITOR				
Sony 15" NI	1280	.25dpi	Green	$650
Sony 17" NI	1600	.25dpi	Green	$1550
MAG 15" NI	1280	.28dpi	Green	$499
MAG 17" NI	1280	.26dpi	Green	$899
ACER 14" NI	1024	.28dpi	Green	$315
ACER 15" NI	1280	.28dpi	Green	$463

SIMM MEMORY	
SIMM 1M-70ns 30 Pins	$50
SIMM 4M-70ns 30 Pins	$198
SIMM 4M-70ns 72 Pins	$199
SIMM 8M-70ns 72 Pins	$399
SIMM 16M 70ns 72Pins	$648

Authorized Reseller Canon digital FUJITSU ATI
23 Milliken Blvd., Unit B9, Scarborough, Ontario TEL (416) 609-6948 FAX (416) 609-2491

Pentium-60 $2,450
486DX2-66 $1,899
- 256K External Cache
- 8MB Ram (70ns, 72 pins)
- Japanese 1.44M Floppy Drive
- 540MB IDE Enhanced Hard Drive
- ATI Mach32 VESA SVGA Card 1MB (Upgradable to 2 MB)
- VESA IDE Enhanced Controller Card
- 2 Serial, 1 Parallel, 1 Game Port
- 15" SVGA N.I. Monitor (1280, .28 dpi) MPR II Low Radiation, Energy Saving
- CD-Tower Case w/220W Power Suppy
- Keytronic 101-Enhanced Keyboard
- Microsoft J-Mouse with Mouse Pad

Multimedia System:
486DX2-66 $2250
- 256K External Cache
- 8MB Ram (70ns, 72 pins)
- Japanese 1.44M Floppy Drive
- 420MB IDE Hard Drive
- ATI Mach32 VESA SVGA Card 1MB
- VESA IDE Enhanced Controller Card
- 2 Serial, 1 Parallel, 1 Game Port
- 15" SVGA N.I. Monitor (1280, .28 dpi) MPR-II Low Radiation, Energy Saving
- CD-Tower Case w/220W Power Suppy
- Keytronic 101-Enhanced Keyboard
- Microsoft J-Mouse with Mouse Pad
- Sound Blaster 16 Sound Card
- Double Speed CD ROM
- Stereo Amp. Speakers
- MPC Encyclopedia CD

year labour & 1 year parts warranty on systems. All prices are cash discounted & subject to change without notice.

Wordprocessor - [Scanetics]
File Edit Font Help
Courier
Logo
Roman
Script
Signature
We convert your Logo or Signature to Windows True Type or ATM fonts that can be used in your software.
Simply send us your Logo, or Signature in black ink and we'll send them back on disk as fonts for your Windows software.
Signature $45.00 Logo $49.00
SCANETICS
RR#4 Stirling, Ont. K0K 3E0 613-395-4244 Fax 395-4245

Christmas Sale
VESA Local Bus Systems
486 DX-33 $1299 or 46/m
486 DX2-66 $1399 or 49/m
All systems include:
- Pentium P24T Upgradable, Intel CPU
- VESA Local Bus [illegible] Mother Board
- Built in Math Co-Processor
- 4 MB RAM, 128K Cache
- 420 MB IDE HD
- 1.44 MB OR 1.20 MB Floppy Drive
- VESA LB 32 Bit 1 MB SVGA Card
- 14" SVGA (1024 x 768) .28 dp NI Monitor
- VESA LB IDE Controller W/2S/1P/1G
- 101 Enhanced Keyboard
- Mini Tower or Desktop Case
- 3 Button Mouse & Pad

TWO YEAR WARRANTY

MULTI MEDIA SYSTEM
Multi Media VESA LB 486DX-33 System
Same as 486 DX-33 plus
Double Speed CD ROM,
16-bit Sound Card & Pair of Speakers
5 CD Titles included
Comptons Interactive Encyclopedia
1994 for Win US and World Atlas
Chess 4000 Mavis Beacon Typing
Monkey Island
ONLY $1575 or 54/m
DX2-66 1675 or 58/m
Monthly Payment Based on 36 month, Downpayment 20% of the total purchase price. Tax included in monthly payment. Instant approval.

HVM COMPUTERS
101 Duncan Mill Rd., Suite G1, Don Mills, Ont. M3B 1Z3
TEL: (416) 446-0535 • FAX (416) 446-0591
Store Hours: Mon - Fri • 10:00 - 8:00 Saturday • 12:00 - 5:00

TOMORROW'S TECHNOLOGY AT TODAY'S PRICES!

CALL IN FOR OUR CHIRSTMAS SPECIAL OFFER

COMPUTER	SYSTEMS PRICE	LOW MONTHLY PAYMENT
386 DX/40 MHZ	$1075	$37 76
486 DLC/40 MHZ	$1110	$38 93
486 SX/25MHZ (Vesa LB)	$1175	$41 12
486 DX/33 MHZ (Vesa LB)	$1293	$44 79
486 DX2/50 MHZ (Vesa LB)	$1324	$46 45
486 DX2/66 MHZ (Vesa LB)	$1475	$51 19

ALL SYSTEMS INCLUDE.
- 4 MB RAM
- Super VGA Monitor Interlaced
- 512K Video Card (Trident)
- 1 44MM 3 1/2" Floppy Drive
- 210 MB Hard Drive
- IDE Controller, 2 Serial, 1 Parallel, 1 Game Port
- Mini Tower or Desktop Case with Digital Display
- 101 Enhanced Keyboard
- Microsoft compatible Mouse & Pad
- MS DOS 6 2 & WINDOWS

$10 OFF ON ANY COMPUTER SYSTEM WITH THIS COUPON

• All 486 DX Systems have built-in math co-processor • 20% Down on Visa or Mastercard • Monthly Payments based on 36 months payment plan
*NO CREDIT CHECKS • FOR UPGRADES PLEASE CALL !!!

PRINTERS		FAX MODEM		HARD DRIVE	
KX-P2023 Panasonic	$215	9600/2400 S/R	$43	250MB	$255
KX P2130 Panasonic	$279	14 40 Fax Modem	$106	365MB	$289
KX P4400-1ppm/300dpi	$645	14 40 Fax Modem goes to 19.2K	$155	545MB	$339
KX P5400-4 ppm/300 dpi 2MB & Postscript	$1,055			420MB	$269
Colour upgrade option kit	$59				

SPECIAL OFFER
3.5 1.44 MB FLOPPY DISKETTES PRE-FORMATTED FOR IBM $4.89 BOX OF 10 UNITS

CDII SYSTEMS
3160 Steeles Ave East Suite 214 Markham, Ontario
Tel: (905) 415-6685 / (416) 518-2012 / Fax: (905) 415-6684

online

Nothing happens in "real time;" in other words people read and contribute to discussions at different times "Anytime, any place " says Harasim. "Online education is evaporating all the old boundaries, the things that kept people apart Besides greater access, the new model encourages active rather than passive learning It encourages group learning too Harasim believes that online education through computer networking is creating a paradigm shift in education "The old models came from 19th Century technology and they're based on transmission models " says Harasim, "One to many broadcast: the TV the radio the newspaper, the lecture! New computer networking technology enables a whole new way of teaching and learning For the first time in human history we can have many to many communication across time and across space Never before have we been able to have group interaction that s time and place independent —the framework for a learning society "

According to Harasim the new technology requires new learning models There's a need to go beyond the old "sage on the stage" model but Harasim knows that telelearning is not a nirvana or a replacement for face-to face communications It expands existing educational models The Virtual University is not a computer tutoring system that replaces teachers. Harasim uses computer networks to bring teachers and learners together in revolutionary new ways

"You can t just open a computer conference and leave it like that for the whole school year," says Harasim "That s like teaching in a barn " The teacher must shape computer space — access times and hard drive memory — as well as people space—learning partners plenary groups and project teams Harasim shapes for purpose place and population She likes to start a course with an online discussion and debate Next she organizes several weeks of activities involving learning pairs and small groups If possible, she holds a full group face-to face meeting at the beginning or end of the term.

Why Computer Conferencing?

The online educational model enhances traditional methods in five ways.

- Text Based Forces people to focus on the message not the messenger, makes thinking tangible forces attentiveness and is socially equalizing, i.e everyone appears the same in text
- Asynchronous: The 24-hour classroom is always open, plenty of time for reflection analysis and composition encourages thinking retrospective analysis, the whole transcript discussion is there for review e.g. "What important questions weren't asked?", class discussion is open ended, not limited to the "end of period"
- Many To Many: Learning groups of peers facilitate active learning, reduce anxiety, assist understanding and facilitate cognitive development resolving conceptual conflict in the group yields new insights.
- Computer Mediated Encourages active involvement as opposed to the passive learning from books or lectures, gives learner and teacher control, interactions are revisable archivable and retrievable; hypermedia tools aid in structuring, interconnecting and integrating new ideas.
- Place Independent Not constrained by geography: panoptic power: collaboration with global experts online and access to global archival resources access for the educationally disenfranchised.

Canadians are pioneers in telelearning and educational networking In 1986 at the Ontario Institute for Studies in Education, Harasim was involved in the first totally online graduate course offered anywhere in the world Now, with Tom Calvert at SFU and partners like the Open Learning Agency Science World BC and MPR (the research arm of BC Tel) she is creating a computer software tool called VIEW (Virtual Interactive Environments for Workgroups) that allows educators and students to shape their interactions in cyberspace

VIEW is the interface the doorway to the Virtual University for both teachers and students For instance teachers can set up student interactions by choosing from a list of learning group types "You click on say, 'Learning Pair' " says Harasim "and VIEW prompts you for the names of two partners from the class list "

The software then sets everything up for you, but more than that, it provides a list of group options that gets teachers to say "I didn't know you could do that I didn t realize you can do a debate!" It guides teachers in the new collaborative learning paradigm a natural consequence of telelearning Harasim calls it active learning or knowledge building Human group dynamics encourages learning in ways much richer than the lecture hall

When School is Out

In designing VIEW, Harasim and her partners have looked far beyond the classroom. It s designed as a general tool for shaping any kind of online interactive space for humanizing cyberspace. Education is just one way to use it Others may employ the same software to create other "places" virtual salesrooms boardrooms, clubs or even churches

Harasim is a pioneer on the electronic frontier "As we settle this place we have to socialize it and civilize it " she says "You humanize a place by creating livable spaces that are accessible comfortable and offer something people want a place for shared experience a community "

Linda Harasim and Tom Calvert are creating a new national research network for telelearning part of an application to the federal Network of Centres of Excellence Program They want to maintain Canada s lead in networked learning systems and to shape Canada's gameplan for the next century There are many research challenges ahead How to improve access how the new technologies can strengthen needed educational reforms, how to reduce current educational inequities related to gender ethnicity social status and geography how to maximize training in industry how to promote lifelong learning in Canadian society and more Currently about 50 researchers from 20 institutions are involved in developing the new Network

The group s ultimate goal is to determine how telelearning can become the basis for a Learning Society in the 21st Century that will provide for lifelong learning anytime anyplace to anyone who wishes or needs to learn ❑

Software Included in Mosaic Handbook

BY KEITH SCHENGILI-ROBERTS

Title *The Mosaic Handbook for Microsoft Windows*
Author Dale Dougherty and Richard Koman
Publisher O'Reilly & Associates
Price $43.95 (Suggested)
Softcover 204 pages 1994
(Includes two 3.5" high density diskettes)

Released in the summer of 1983, Mosaic has been taking the Internet world by storm.

No more memorizing obscure Unix commands, or dealing with an unfriendly character-based interface. Mosaic's graphical interface makes "surfing" the Internet an easy ride. One thing that has been missing is a decent guide on how to install and use Mosaic. With *The Mosaic Handbook for Microsoft Windows* (along with releases for the Macintosh and for the X-Windows platforms), O'Reilly & Associates have put together another ground-breaking publication.

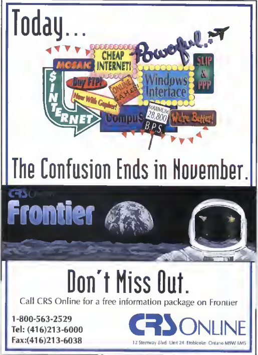
The book comes with a copy of Enhanced Mosaic from Spyglass software (based on the more familiar NCSA Mosaic readily available from the Internet). Once you have the dialup/network connection set up all you have to do is install the program on the diskettes and you can be up and running in minutes.

The book provides a good introduction to Internet browsing programs, and shows where Mosaic fits in. The version of Mosaic provided is good for the beginner to use: it starts you with O'Reilly's own Global Network Navigator (GNN) system, one of the best places to start trolling for information on the Internet. The book is a good manual for the software, taking the user through the basics without being patronizing, and encouraging the user to explore the more intriguing points of interest on the Internet. There are good sections on how to configure Enhanced Mosaic to suit your purposes, including instructions on how to get the full multimedia capabilities out of the program. For people interested in making their own impression on the Internet, there's a chapter devoted to teaching the basics of HyperText Markup Language (HTML), which is used to create much of what you see when cruising the Internet via Mosaic.

One crucial area this book lacks is a section dealing with how to connect Mosaic to your online Internet account. Most users find this the most frustrating part of "getting wired," and *The Mosaic Handbook for Microsoft Windows* just glosses over the subject. While it is impossible for one book to cover all of the circumstances in which people can set up their Internet connections, a chapter should have been devoted to covering the basics of this area.

Despite this deficiency, *The Mosaic Handbook for Microsoft Windows* is a good book for anybody looking for an easy introduction to the program that is revolutionizing the way people use the Internet. It's safe to say this book will be followed by floods of imitators on the market, but make no mistake — this is the book other publishers have to beat. ❑

Contact: O'Reilly & Associates 1-800 998 9938
Internet e-mail: ORDER@ORA.COM


Today...
CHEAP INTERNET!
Powerful..!
MOSAIC
SLIP & PPP
$INTERNET
Buy FTP!
ONLINE GAMES
Windows Interface
Now With Gopher!
MAXIMUM 28,800 B.P.S.
Compu$
We're Better!
The Confusion Ends in November.
CRS Online
Frontier
Don't Miss Out.

Call CRS Online for a free information package on Frontier

1-800-563-2529
Tel: (416)213-6000
Fax:(416)213-6038

CRS ONLINE
12 Steinway Blvd. Unit 24, Etobicoke, Ontario M9W 6M5

1 StopComputerShop
"The Software Stores With A Difference!"

#1 Retailer Of USED Software
Outpost, Pagan, TFX, Falcon Gold, Civilization, HiJack, PC Tools, Cakewalk, Plus too many more to mention!

ASK US HOW TO TURN YOUR SOFTWARE INTO $$$$

239 Queen St. E. #16
(Under the Mandarin Restaurant)
Brampton
905 455-8306

3749 Bloor St. W
(Next to Westwood Theatre)
Etobicoke
416 233-8435

Software Previews
Unexpected Incompatibility problems - NOT !!!
Preview Before You Buy.
Phone for details of our V.I.C. Club Membership.

Computer need upgrading or repair? Let our COMPUTER MECHANICS give you a FREE ESTIMATE!

Value Pricing

Seagate 420 H D	329 99
1 Meg Simms 70ns	56 99
Seagate 528 H D	389 00
486DX2/66 256KB	499 00
Sound Blaster 16	129 99
3 5" HDPF Disks	4 99
NHL 95	69 99
MS Office 4.2	389 99
GVC 28 8 Ext	299 99
Trident 1M VLB	114 99
Rebel Assault CD	46 99
Discus Kid's CD's	31 99
Xmas for Windows	11 99
TFX CD	45 99
DOS 6 22 Full	79 99
Print Artist	64 99

* PLUS MUCH MORE!!!!
**PHONE FOR PRICING

20-70% OFF All New Books

Canadian Owned & Operated

Take the risk out of buying with Soft Comp's

3-Day Software Returns

If you're not satisfied with your Soft Comp purchase, return the product within three business days and pay only a 20% restocking fee!*

Here's just a small sample of what we carry Call for more!

	Price	Restocking fee		Price	Restocking fee
Autodesk 3D Studio	560	112	Delta V	70	15
Font Chameleon	283	57	Doom II	79	16
Power Transl Chinese	174	35	Iron Cross	68	15
QEMM 7 5	100	20	Master of Magic	71	15
QuickBooks 3 0 /Win	155	31	Quarantine	56	15
Quicken Dlx. 4 0 /Win	95	19	System Shock	82	17
Simply Acctg 3 0 /Win	154	31	Under a Killing Moon CD	90	18
Paradox 5 0 /Win upgr	302	61			
Xtree Gold 4 0 /Win	98	20			
Aces of the Deep	76	15			

Mac software, too! Call us!

3 DAY
THREE DAY RETURN POLICY

Soft Comp
Phone 967-7894 10-6 Mon-Fri 10-5 Sat
46 St Clair Ave E Toronto Ontario M4T 1M9
* some conditions apply $15 min restocking fee per item

online

Playing on the information highway

Training for Internet Newbies

BY CAROLYN L. BURKE

The Internet — the international network of networks of today, which forms the basis for the information superhighway of the future — is growing at an explosive pace. With over 25 million people already online, and over a million more coming online every month, the Internet seems likely to become as ubiquitous as the telephone, and to do so much more quickly than the telephone did.

As a result of this phenomenal rate of growth, many of the resources of the net are being stretched thin. For example, during the recent collision of the comet Shoemaker Levy 9 with the planet Jupiter, the NFSNET backbone — the high speed core of the Internet, which interconnects all the other networks which make up the Internet — collapsed twice under the load of hundreds of thousands of eager astronomy fans viewing the latest and greatest up-to-the-minute pictures of the collision, which were being made available by NASA and others.

These technical problems are being addressed — the long range plans for the Internet call for continuous upgrading of the backbone capacity, and other changes designed to handle heavier loads. But one aspect of the heavy and growing load on the net has received little attention — the human aspect.

As the net continues to grow more and more quickly, the proportion of its population that is relatively inexperienced is also growing. A few years ago, the average Internet user had several years of experience on the net, and new users could count on learning the ropes from their more experienced friends and co-workers. But these days, new users are often set loose on the net in groups of several hundred thousand. For example, the commercial service America On Line recently made Internet access available to its entire user community at once.

The results were not pretty: America On-Liners quickly acquired a bad reputation on the Internet. Why? Because the Internet is an almost completely decentralized organization (by far the largest decentralized organization that has ever existed, by the way) and relies to a very large extent on the care and goodwill of its users for its smooth operation and its very existence. The etiquette of the Internet — known as netiquette — governs almost every aspect of activity on the net, setting out what a citizen of the net must do to take advantage of its myriad resources in a responsible way. Did the America On Liners have bad intentions? Of course not, but they were almost completely unfamiliar with the rules of good conduct on the Internet, i.e. with good netiquette.

What does good netiquette involve? It's largely an application of common sense to the world of the Internet, and it asks users to be cooperative, not to inconvenience others for frivolous reasons, and to eventually give something back to the net community from which they have benefited. That sounds easy enough, but it takes a good deal of knowledge of the Internet to know what will inconvenience somebody else; for instance, to know that retrieving a many-megabyte file from somebody's ftp server during business hours will be a serious inconvenience if the ftp server is on a SLIP connection, or to know the difference between multiple posting and cross-posting on the netnews, and to know which one is a no-no.

The solution to these problems is more

SERVICE & REPAIRS

FLAT RATE CHARGES

Monitors, Terminals, Laser Printers, Dot Matrix Printers, Ink Jet & BubbleJet Printers, Component & Part Repairs, Dealer Parts, Accessories, Fuser Assemblies, Toner Cartridges, Drum Units

In-house or
On-site Repairs,
All makes and models,
Refurbished parts
Repaired Parts,
Pick up and delivery,
Dealer parts and pricing.

"Reliable
Available,
Convenient"

Hewlett Packard,
Canon, Okidata,
Qume, Kyocera, QMS,
Toshiba, Epson, Panasonic,
IBM, NEC, Texas Instruments,
Sharpe, Ricoh, Roland,
USA Fele, Data Products
and many more!

KompuKare Services
80 West Beaver Creek,
Unit #12, Richmond Hill
(905) 709-1122

and better training for new users of the Internet. Better training of new users of the net will benefit both the newcomers and the old hands. For "newbies" themselves, some introductory training in the tools and techniques of the Internet and in netiquette will save them the possible embarrassment of doing something exactly the wrong way in some very public place. Training will also spare newbies the enormous potential for getting lost and confused that exists on the Internet which already has twice the population of New York City and many times the complexity.

Better training for new users of the Internet will also benefit experienced users of the net, who will be spared the aggravation of hearing the same basic questions over and over from flocks of new lost confused and inexperienced newcomers. Even more importantly the arrival of millions of new users with no idea of what constitutes good netiquette places the resources of the Internet itself in danger as happened during the Shoemaker-Levy episode. Popular resources may get swamped and have to be withdrawn due to unacceptable network load.

In order to find out how best to address the problem of Internet training, my company Finite Systems Consulting and Ryerson Polytechnic University's Centre for Advanced Technology Education in Toronto recently undertook a survey of experienced Internet users. We asked experienced Internet users what they would have liked to learn first, what Internet applications are most important to them and what knowledge they consider crucial to successful use of the net.

The results were not what one might expect. In short experienced Internet users said that the most important knowledge for successful use of the net and the highest priority in Internet training was netiquette — the knowledge required for savvy professional use of the net. Technical training in the software tools of the Internet also ranked high but a large majority of users indicated that they placed greater importance on netiquette skills than on technical sophistication.

In the rest of this article I'll present a guide for the new user of the Internet on how to choose a good Internet training course based on some of the results of our survey.

Many respondents to the survey recommended that the new user pick a training course with the right level of technical detail to suit her or his personal goals. For example a user does not need to know about UDP datagrams, T1 connections, and DNS caching mechanisms if what he wants is to send and receive e-mail and to find information sources on the subjects that interest him or her.

Many respondents also pointed out the importance of picking a course which serves one's specific needs. For example a business professional needs to know not only how to use the tools and resources of the net but also how to do so professionally in a way which will reflect well on him and his company (which means using good netiquette, using the right tool for the right job, making use of services like Finger and Whois to research his contacts, etc.). As a second example if a user wants to use the net to do business or professional research in addition to using it for communications by e-mail she should pick a course with a concentration on the resource discovery tools used for finding interesting information on the net — the net is so big and varied that although massive quantities of information are available finding them requires some skill.

Another frequent recommendation from survey respondents was to look for instructors who have extensive experience with the net and a course that has been well researched: the contents of a course should be based on substantial empirical studies, not on the off hand impressions of the organizers about what's important, and the course should provide you not only with how-to information but with a rich set of interesting starting points from which to start begin exploring the fascinating world of the net.

Finally it is crucial that the course you select contain a hands-on component in which you get a chance to try out the tools and techniques you've been introduced to. No amount of abstract explanation can substitute for the experience of surfing the Internet on one's own using a wide variety of tools and techniques.

In the last year or so the need for better training of new users of the Internet has begun to be recognized. For example in Toronto all three major universities will be hosting Internet training seminars in the coming months. With a willingness on the part of new users of the Internet to look before they leap and a little luck the fascinating richness of the Internet can continue to grow into the future.

Carolyn L. Burke is one of the principals of Finite Systems Consulting (carolyn@cogsci.L.chin u.sc.[p 416 538-8588]), a Toronto firm specializing in internetworking and data security.

B.U.S. COMPUTERS
80 Park Lawn Rd, Suite 302, Etobicoke, ON M8Y 3H8
HOURS Mon Fri 10am - 7pm. Sat 11am 5pm
Call: (416)253-0689 Fax:(416)253-7790

VL 486DX/33 — 4MB RAM 340MB HDD, 1MB SVGA VL BUS, 14" SVGA NI, ENSP — $1295 Lease $46 / Mth
VL 486DX2/66 — 8MB RAM 72-pin 420MB H, 1MB SVGA VL BUS 32-bit, 15" SVGA NI L/R, ENPS — $1695 Lease $60 / Mth
VL Pentium 66 — 8MB RAM 72 pin 540MB H, 2MB ATI Graphics Xpression, 15" SVGA NI L/R, ENSP — $2695 Lease $93 / Mth
PCI Pentium 90 — 16MB RAM pin 720MB H, 2MB ATI Graphics Ultra PRO, 15" SVGA NI L/R, ENSP — $3495 Lease $120 / Mth

Main Boards [illegible]
Hard Drives [illegible]
Video Cards [illegible]
Monitors [illegible]
Multi Media [illegible]
Fax Modems [illegible]

CD Recordable?
We create CD's for your needs
From files or scanned images
For publishing, imaging or database transfer
Just think, 650MB on One CD
We Ship across Canada
To Order Call 1-800-760 5727

Service - Quality - Price
Let Us Show You How We've Built Our Reputation

TRULY IRRESISTIBLE
ARTWRIGHT

Just in time for Christmas...

ARTWRIGHT Detailed Finish
✓ Unique Joints
✓ Rounded Finish
✓ Sleek
✓ Functional
✓ Versatile

Unlike our competitors we have these reasons to use the word Quality

TX28 Computer Table
Irresistible Price (reg. $475)
NOW $199 (plus taxes)
Includes TX55 Paper Hopper & TX83A Mouse Board

Available at these fine locations throughout ON.

■ IN ONTARIO:

AXXON OF CANADA
3979 Tecumseh Road East
Windsor Ontario N8W 1J5
Tel.: 519-974-0163
Fax: 519-974-0166

STEALS DIRECT (OTTAWA)
1531 Merivale Road
Nepean Ontario K2G 3J5
Tel. 613-228-7382
Fax: 613-228-7243

DATA TEK
71d London Road, Unit #2
Sarnia, Ontario N7T 7V8
Tel. 519-332-1681
Fax: 519 337-7001

GREY TECH COMPUTERS INC.
550 Alden Road, Unit #110
Markham, Ontario L3R 6A8
Tel. 905-470-1425
Fax: 905-470-9556

CENTENNIAL COMPUTER SOLUTIONS
2732 Barton Street
Hamilton, Ontario L8E 4M6
Tel 905-560-6400
Fax: 905-560-9554

CANADIAN BUSINESS AUTOMATION
5172 Dundas Street West
Etobicoke, Ontario M9A 1C4
Tel.: 416-237-0363
Fax: 416-237-0499

G & S COMPUTERS INC
15 Queen Street West
Elmvale, Ontario L0L 1P0
Tel.: 705-322-1997
Fax: 705-322-0910

HOWARTH'S HOME CENTRE
288 Scott Street
Fort Frances, Ontario P9A 1G7
Tel.: 807-274-2944
Fax: 807 274-9204

SUCCESS NETWORK
1001 Meyerside Drive
Mississauga, Ontario L5T 1K8
Tel 905-564-9744
Fax: 905-795-7708

For dealer inquiries, call:

TRIMEX MARKETING INC.
3495 14th Avenue
Markham, Ontario L3R 5R5
Tel.: 1-800-668-6670
Fax: 1 905-474-1952

Annual Survey Of Canadian Payroll Software

BY JOAN HORNAL

Sixteen Canadian payroll programs have been reviewed in this survey. All except Checkmark (Macintosh) were installed and tested using DOS 6 and Microsoft Windows 3.1 on a 486/33 system with a color monitor and all performed well in this environment. Many simple programs will run as well on slower systems using earlier versions of DOS. Canadian payroll software continues to improve, user interfaces are becoming more consistent and most of the products have added new features and become more flexible. Many of the products are offering Laser printed cheques and T4's this year. Some programs provide for remittances on diskette and offer support for Revenue Canada's SBRN.

AccPac Plus Canadian Payroll Few changes have been made to Version 6.0G. It provides for a combined total of 32 user-defined earnings, taxable benefits accruals and non statutory deductions per employee. Earnings and deductions can be calculated from user-defined formulae. Recurring time sheets containing standard earnings and deductions provide for fast payroll processing.

A General Ledger account can be associated with each earning and deduction code and earnings codes can be assigned to specific T4 boxes. A pay period and yearly maximum can be assigned to earnings and non statutory deductions. Time sheet entries can be imported from non AccPac Plus programs using the new Import Time sheets function.

Employees can be assigned to General Ledger departments for departmental costing or time and payroll burden can be posted to a job for job costing. You can choose either to interface with the AccPac Plus Job cost module or select payroll cost reporting which will include job costing information on the Time sheet and cost centre reports. You can also allocate benefits to different jobs or departments (company portion of UIC/CPP will not be allocated to a specific job, however).

The program automatically indexes the TD1 claim in the employees" records. The payroll register summary subtotals employee and employer unemployment insurance contributions by UIC rate. The program also checks for errors in T4 boxes before printing the T4's and allows the user to make corrections before printing. This comprehensive and flexible program is a good choice for businesses requiring complex earning and deduction calculations, job cost data and automatic posting to AccPac Plus General Ledger.

Aspen Avanti has been included in this survey for the first time. It is a complete payroll system suitable for large businesses in a network environment and businesses downsizing from mainframe applications. Avanti payroll is extremely flexible. Employees can be assigned to pay groups, departments, WCB groups, vacation groups and locations. Earnings and deductions are all user definable. Complex deductions and benefits can be defined with a spreadsheet type formula to facilitate calculations within the program. Rate grids are available for groups of employees assigned to the same wage scale. Earnings can be entered from timecards, imported or generated by the system. The program comes with a complete set of standard reports and custom report formats can be set up using the report writer. The payroll run can be canceled, corrected and reprocessed even after cheques have been printed. Avanti payroll has full job costing capabilities and large general ledger account numbers. Data can be integrated with the Avanti Human Resource Management system and General Ledger or exported to third party accounting systems. A notepad, calculator and a print screen function are available with the system. You can file submissions to CEC and T4's to Revenue Canada on diskette. This is a very powerful payroll system for complex payrolls.

Checkmark Canadian Payroll is one of the few Canadian payroll products available for the Macintosh. The price has been reduced since our last review. The payroll is very simple to set up and to use. It provides for seven hourly earnings and twelve definable income categories. There are sixteen user definable deductions. The program retains hourly time sheet data from one pay period

➤

You Are Here.
One Day, You Want To Be Here.

to the next to speed up data entry It has a department distribution feature that distributes wage amounts to departments or jobs and calculates and distributes the related employer s portion There is also a feature to import or export employee information to or from a text file Reporting capability is good.

Daceasy Instant Pay is a simple, inexpensive payroll for a small business Don t try to install this program after hours or on a weekend because you have to phone the support line for a code to activate it Once active the 20 employee version is very simple to set up and use You simply enter the hours or amount you wish to pay an employee and the program calculates the statutory deductions You can view the cheque on the screen and print a cheque or advice When you exit, the year to date information is updated It prints T4 s and keeps detailed historical information but does not print a record of employment The program interfaces with DacEasy Accounting and Quicken.

Daceasy Payroll version 4 3 is similar in set up and processing to InstantPay It also requires a code word before using In addition to the features in Instant Pay Payroll also contains fields to track some personnel management data such as hire dates and review dates, and it prints Records of Employment and tracks employee information by department. Each department can be assigned a full set of general ledger accounts for costing purposes DacEasy payroll is very easy to set up and to use and is thus a very cost effective system for small businesses.

Easypay has just released a new version of its easy to use program in the mid-price range It offers a flexible selection of earnings benefits and deductions for union type or non profit payrolls Advanced features include quick entry timecards quick payroll runs recurring timecards and on-line cheque reconciliation all timesaving features Employees like the direct deposit feature I like the employee pay history feature that allows you to display a pay cheque record and then access the detailed pay record Reporting is very comprehensive and flexible Simple job costing can be obtained using departments The program interfaces with many General Ledger products The manual is well laid out and very easy to use and on line help is context sensitive.

ESI Payroll is a simple to set up and use multiuser payroll system Its pricing is unique The company does not charge for the program but charges for tax table updates and the manual Its history retention is good and T4 s can be prepared from this year's data or last year's data Context sensitive help is at your fingertips Reporting is complete except for UIC Records of Employment. The program interfaces with Safeguard's ESI Law

Grandmaster II is a good choice for large companies with many earning and deduction types, companies considering downsizing from mainframe systems, companies with union contracts and nonprofit organizations. It provides 50 user-definable earnings and 50 deductions and benefits which are linked.

Calculation formulae can be assigned to both earnings and deductions Grandmaster provides a user definable matrix type table of wage rates such as you would find in a union agreement. The table cell coordinates can be entered in the employee's file Global rate changes are entered to the table and all employees files are updated. There are quick entry features for entering timecards with multiple rates of pay dates and account numbers

A sample company is available and context-sensitive help is always available to assist in the set up and use of the software. The program provides an extensive cost breakdown by department and extremely flexible cost reporting

The product's special features include the ability to associate each employee's earnings and deductions with multiple General Ledger accounts and departments Where an employee s deductions exceed his earnings the program will keep track of any excess or arrears automatically and will deduct the amount automatically from the next pay Files are created for direct deposit interface with bank systems An employee can have more than one bank account.

Grand Master II provides an interface with most General Ledger applications through its import and export feature A report generator is included in the program to enhance the flexibility of reporting

Great Plains Canadian Payroll is a powerful flexible payroll program Its most notable feature is the unlimited number of earnings deductions and taxable benefits which can be calculated and tracked I liked the setup of "Employee pay type authorization" where the codes are already predefined and you just have to select them Recurring transactions can be stored eliminating reentry of data for each payroll.

A second level of on-screen help is available and can be configured by the user Set up is complex however, the getting started manual provides detailed checklists with the proper task order for installation and setup Reporting is very flexible and complete The program retains and prints an employee s entire pay history for the year This report and other audit trails are excellent

Great Plains is excellent for job cost purposes as it tracks both the hours and the amount by job expenses the company portion of the expense to the job and performs automatic overtime calculations Great Plains Version 7 Canadian Payroll will interface with Great Plains General Ledger, Job Cost and new Dynamics program

Help Canadian Payroll is a moderately priced product that provides a lot of features. Help does not require an annual fee for tax table updates The user may manually

➤

You'll Need Good Directions.

You ve figured out the big secret by now true freedom requires money Trouble is you ve probably realized an even more horrifying truth the get-rich-quick thing is a cruel hoax Chances are you re not going to win the lottery nor make it in Hollywood And your rich aunt? She ll leave it all to the SPCA

Fortunately you ve got a terrific Plan B CANTAX's MoneyMap A few clicks and you can work out realistic goals A few more and you've got a personalized strategy to take you there And if you re the curious type you can try an infinite number of "what-if" scenarios

Plus if you buy MoneyMap right now it ll save you money as well as earn it Because CANTAX s acclaimed T1 Tax Return Software is free with registration Its Canada s number one income tax software and it s the fastest easiest and most accurate way to do your taxes

Find MoneyMap where you buy software or call 1-800 265-3800 After all you know where you want to be you just need the right map

MoneyMap
Personal Financial Directions
You Can Get There From Here

update the statutory deduction tables or use the tax table updates provided with a new release. User defined earnings may use a forward averaging or bonus method in addition to the regular method of tax calculation.

Help can import time cards from other programs. Other features include the easy entry and accumulation of daily timecards, easy modification of statutory deduction calculations, simple customization of the cheque advice and good facilities for locating and correcting errors. It can record costs by department, by code and by job (groups).

HELP provides General Ledger interface files for many general accounting programs and provides a concise month end report for manual General Ledger postings. It prints a variety of reports and forms, including T4's with footnotes and the Record of Employment. The manual is very easy to follow and fun to use as it takes a humorous approach to the set up of a company's payroll.

KIS Payroll For Windows has taken full advantage of the Windows interface. Set-up is very easy and fast. Help is available through the "Help" function on the control menu, and through a feature called the "Advisor" on the control menu.

The "Advisor" guides the user through the set up procedures and the steps necessary for a payroll run. It also advises the user starting the program of procedures that should be completed before the next payroll run. Earnings and deductions are provided for you to simply click the mouse on the selected options. Time cards and additional earnings are entered quickly and easily to dialogue boxes, which retain the data from the previous payroll run as a default to speed up data entry.

A payroll may be recalculated, amounts can be overridden and cheques can be printed as often as necessary for the payroll to be correct. You select reports and audit trails for viewing or printing by clicking the mouse. Reports are difficult to read and there is no report prepared specifically for the preparation of payroll remittances.

One-Write Plus by NEBS Software is a new simple to install and use payroll product that can stand alone or be integrated with One Write Plus Accounting Software. You simply enter a timecard for each employee and calculate the pay.

One Write Plus lets you view the payroll register on the screen or print it before printing the cheques. It is easy to set up taxable benefits and I like the way it tracks vacation days available and taken. Payroll calculations can be undone prior to issuing and posting cheques, but adjustments become awkward after posting. One-Write Plus is a good payroll solution for small to medium sized companies.

Pay-Calc is an inexpensive, easy to use program that has many features of more expensive programs. Because it does not use a graphics interface, it takes up less room on your hard drive and can be installed and run from a high density disk if you do not have too many employees. You are guided through the set up process and not allowed to enter any time data until the set up is complete and correct.

A Time sheet calculator is available to enter and total employee Time sheets using daily starting and ending times. There is an unposting feature available to correct errors found after posting of the payroll and a mass change feature is also available to change amounts. The program will track apprenticeship hours. Earnings, benefits and deductions are easy to set up. Ten fields of personnel information can be entered to an extra employee screen. Pay history retention is good and the reporting is flexible. The manual is on line and help is context sensitive.

Paycheq Controller is a complex, flexible payroll product designed to interface with Real World, AccPac Plus and Timberline accounting and job cost systems.

The screens and keystrokes are similar to those of Real World software. Menus and data entry screens are not user friendly. There are no look up features for locating employees or codes. Screen prompts and help have been improved since the last review but are still poor.

The manual is complete and easy to use and a good tutorial is provided with the system. Earnings, benefits and deductions are unlimited and totally user definable and as a result the program is very powerful, but the set up is hard work because no predefined earnings or deductions have been supplied. Paycheq Controller provides all the reports a business would require as well as Records of Employment, T4's and a direct deposit interface.

Paymate, available in three versions depending on the number of employees you have, is a program to grow with. Paymate is compatible with most popular accounting packages. A calculator and notepad are available in all versions.

Paymate is extremely easy to set up and to use. Context sensitive help is at your fingertips. The program also has an on line manual. Selected employees with fluctuating salaries can elect to have their pay calculated using the cumulative averaging tax calculation method allowed by Revenue Canada.

This product will batch timecards for quick set up and review of payroll entries. The pay is calculated as the time sheet is entered and can be reviewed on the screen for errors. Reporting is very comprehensive with good pay history retention. Personnel information such as benefit plans, due dates for salary reviews and increments and education and skills information can be added to Paymate 20 and Plus. In set up for job costing, payroll costs can be checked to include benefit costs and overhead costs can also be added.

A direct deposit feature and a time clock interface are available with Paymate Plus. Paymate Plus has excellent reporting features and is one of the most flexible and easy-to-use products I have reviewed.

Powerpay is an easy to use payroll program for a single company. A multiple company version is also available. The names of four taxable benefits and six deductions can be defined in addition to those assigned by the program. Payroll can be calculated individually by employee or by pay period groups.

There is good context sensitive help. There is no provision for entering manual cheques or after the fact pay. Adjustments to the payroll are limited to adjusting the opening entries at start up and deleting and reentering a pay record. Powerpay does not prepare a Record of Employment. It does, however, calculate the workers' compensation liability for each employee covered. The program prints T4's but does not produce a T4 summary report. ❑

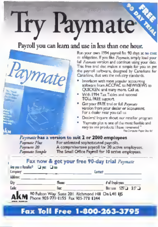
Prepared by Joan Homal B Sc CGA, of Joan V Homal & Co Inc. a public accounting practice in Vancouver

See the Canadian Payroll Software chart on pages 100-101.

GrandMaster II Payroll Software

Hundreds of Canadian companies have saved thousands of dollars and countless hours by processing their payroll with GrandMaster. Now, GrandMaster II offers windows like features, multi-user, multi bank accounts and direct interface to popular General Ledger systems. For all sizes of companies operating in DOS/OS2/Windows.

CANPAY Call (800) 665 5129 or (204) 987-8520 for a dealer near you.
Winnipeg, Vancouver, Calgary, Toronto


Try Paymate

FREE 90 DAY TRIAL

Payroll you can learn and use in less than one hour.

Run your own 1994 payroll for 90 days at no cost or obligation. If you like *Paymate*, simply load your full *Paymate* version and continue using your data. This free trial disc makes it simple for you to get the payroll software, designed by Canadians for Canadians, that sets the industry standards.

- Interfaces with most popular accounting software from ACCPAC to NEWVIEWS to QUICKEN and many more. Call us.
- With 1994 Tax Tables and national TOLL FREE support.
- Get your FREE trial or full *Paymate* version from your dealer or accountant. For a dealer near you call us
- Dealers! Inquire about our reseller program
- "Paymate plus is one of the most flexible and easy to use products I have reviewed."
The Computer Paper Dec 94

Paymate has a version to suit 2 or 2000 employees

Paymate Plus	For unlimited sophisticated payrolls.
Paymate 20	A comprehensive payroll for 20 active employees.
Paymate Simple	The Small Office Payroll for 10 active employees.

Fax now & get your free 90-day trial *Paymate*

Are you a Reseller? ☐ yes ☐ no
Company: ______ Contact ______
Address: ______
City: ______ Phone: ______ # of Employees ______
Code: ______ Fax: ______ Disc size 5.25" ☐ 3.5" ☐

AKM 80 Fulton Way Suite 201 Richmond Hill On L4B 1J5
Phone 905-771-1155 Fax 905-771-1344

Fax Toll Free 1-800-263-3795

DOWN TIME PROTECTION

If your system crashes how long does it take to get it back up to speed? Sometimes its a simple re-boot, other times you need the backup.

What about you and your system — your income system. If a disability causes your income system to crash, a simple re-boot probably won't work. Do you have a back up income system that will kick in until you get back up to speed or will you stay off line and exhaust your savings?

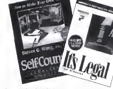
Now is the time to install a disability income system or upgrade your existing one.

To arrange a confidential appointment
Contact Keith Nash, CLU CH.F.C
Chartered Financial Consultant
at (416) 522-2083 or
keith.nash@cagreen.com

A Test of Wills

Two Estate Planning Packages Revealed

BY ROD LAMIRAND


How to Make Your Own Will
Steven G. Wong
Self-Counsel
It's Legal
America's best-selling legal software
Parsons

Certainly death is a grave concern. It would be cavalier to make light of that final dark And yet, while the lights burn and there is wine in our glass, let us speak lightly, and at Death's expense. So, if you are planning on passing on, and who isn't, here are two pieces of software that can help you plan for that day when the Grim Reaper points his bony finger at you and says "Next!"

Wills Self Ware

Wills Self Ware is a DOS program for an individual wanting to write his or her own simple will It is stand-alone software that takes up under 200K of hard drive space It is menu driven but has mouse support Only two people can use the program, although they can each edit their wills as often as they like The program writes back to the install disk prior to installation recording the two names chosen New names cannot be inserted into appropriate spaces in the will, so double check your spelling! Wills Self Ware is published by a Canadian company named Self Council Press Best known for a line of books concerning power of attorney business incorporation wills and other legalities Self-Council is head quartered on the green slopes of British Columbia's North Shore

Inside the box is a concise and useful book by lawyer Steven G Wong The book is called Wills for (Insert your province here) You see, Self-Council has a version for Ontario as well as British Columbia Manitoba Saskatchewan and Alberta (Currently there are no Quebec or Maritime versions) The book a stand alone product which is included with the program is informative I had not given any thought as to whether or not my executrix might need to have the legal ability to invest estate equities on behalf of my suddenly parentless daughter to effect a better rate of return on her future entitlement Fortunately the book makes such concerns clear

I liked the fact that there were pre written sections in legalese for most of the things that I needed Want burial? There is a template Just specify your arrangements Cremation? No problem What about your ashes? Donate your body to science? Sure all or just parts? All of this and other the less gruesome considerations are here The program is competent and the book is good At $40 it would be a good idea for all of us to deal with some of the many things that we need to consider before it is too late It would also be a good way to support a Canadian company

It's Legal Canada

Unfortunately for Wills Self Ware It's Legal Canada is also available It's Legal Canada is a Windows program from an American company called Parsons Technology I was very hopeful that the Canadian company would win this comparison, and it was close. I could even begin by pointing out that It's Legal Canada takes up over 2 MB of space and well, and the logo is very plain Very plain! But when it comes right down to it this program is bloody well excellent

Installation was quick and pleasant The program group contained two icons one for the program the other a readme file Once in the program I was given the option of proceeding with an interview format or form based (template) format Having found the interview format so successful in tax software I chose it Windows came and went asking simple questions prompting me with additional information asking only that I select a box or read some information Executor testator beneficiary and guardian all streamed past and then I was done Was the program shallow? No I compared the two wills True, they were similar but though the It's Legal Canada process I had chosen some different items I read them over and yes that is what I wanted

Add to this the benefits of being Windows-based and this program is a winner Best of all It's Legal Canada isn't just will software — it also has Estate Planning Powers of Attorney (five different types) financial software(promissory note general receipt bill of sale) and a real estate purchase/sale agreement Lastly It's Legal Canada prints out a beautiful document which somehow seems important when you look down at the paper that may represent your last chance to be heard I don't want to plug this program any more so I won't mention the fact that you can edit the name of the testator as many times as you like, or bring up the cool loan amortize or stress the $40 price tag.

By the way there is another program out there called Will Builder It is an American program, written for the US, and will ask you what state you are residing in. Don't buy it unless you plan to live and perhaps die in the US.

Your time on this little blue ball floating in space is coming to an end Drink and smile and laugh now while you can, but if you want to save your friends and family a lot of time and money make a will For a simple will either of these programs will do a good job Choose one and do it

With that in mind, I would like to tell you that there is a little saying that they have in the funeral business It goes like this: "We'll be the last ones," they say proudly, "to let you down." It's good to see that morticians haven't lost their sense of humor It's also fun to remember that death spares no man, even an embalmer

Contacts

Wills Self-Ware Self Counsel Press
1481 Charlotte Road North Vancouver BC
Canada V7J 1H1

It's Legal Canada Parsons Technology
One Parsons Drive PO Box 100
Hiawatha Iowa 52233-0100

Just *try it.*

Free 45-day trial!

Includes Current Tax Tables

Why are we offering you this trial package free Because we are so confident you will like our new expanded version of *Easypay* Canadian Payroll Software A limited number of 45-day trial copies will be made available free of charge These are available through your local computer dealer or your accountant

When your 45-day trial period is over you can purchase the fully operational *Easypay* from your dealer You will not lose any of the information entered during the trial period

Easypay interfaces to the following software packages

☐ ACCPAC Plus ☐ PLATINUM ☐ NEW VIEWS ☐ SIMPLY ACCOUNTING
☐ SOLOMON III ☐ REALWORLD ☐ FLEX ☐ OTHERS

This is a limited time offer and it is only available through an authorized dealer or accounting firm. Please call us if you are unable to find an authorized dealer in your area.

Fax 1 905 825-9660 Phone 1 905 825-8020

easy pay

Payroll Made *Easy*

All product names are registered trademarks of their respective companies

Canadian Payroll *Software*

BASICS								
PRODUCT NAME	**ACCPAC PLUS Canadian Payroll**	**AVANTI CANADIAN PAYROLL**	**CHECKMARK Payroll**	**INSTANT PAY**	**DACEASY PAYROLL**	**[illegible]**	**[illegible] PAYROLL SYSTEM**	**GRAND MASTER II PAYROLL SYSTEM**
Version	7.0C	Ver 6?			V 4.5	V 8.000 [illegible]	V 1.4 (July 1993)	[illegible] V 1.9
Company Name	Computer Associates Canada Ltd	[illegible] Avanti Inc.	[illegible]	Dac Easy Canada Inc. Unit 7	Dac Easy Canada Inc. Unit 7	[illegible] Consulting Systems Inc.	[illegible] Software Inc.	Cougar Computer Software Ltd
Address	2935 Airport Rd. Mississauga, Ont	Suite 1400 10655 Southport Rd. S.W. Calgary, Alberta T2W 4Y1	56 Centre St. Thornhill, Ontario L3T 3N3	20 Steelcase Road West Markham, Ontario L3R 1B2	20 Steelcase Road West Markham, Ontario L3R 1B2	1735 Heritage Way Oakville, Ont L6M 3A3	#201 1544 Marine Dr. West Vancouver, BC V7V 1H8	9-1329 Niakwa Rd. E. Winnipeg, Man R2J 3T5
Telephone	1-800-225-5224	403-253-2366	905-771-0944	1-800-363-3314	905-940-3314	905-825-0020	604-926-7817	204-254-4726
Fax	905-676-6736	403-278-3070	905-771-5861	905-940-0008	905-940-0083	905-827-9060	604-926-8447	1-800-665-3729
Help Line		403-225-2300		905-940-3314 ext. 301	905-940-3314 ext. 301	905-825-8093	604-926-7083	
Operating Systems	OS/2 or DOS 3.1 or Windows 3.0	DOS, Windows, Novell, Unix, VMS, Mac	Macintosh 4.2	Dos 2.0 or	Dos 3.1 or	DOS 3.1 or	DOS 5.0	DOS, OS/2, Unix
Minimum Hardware Requirements	PC	PC 386	Macintosh 1MB RAM	PC	PC	PC	80386 PC	386 or PC
	512K RAM & Fixed Disk	Fixed Disk 4MB RAM	Single Drive or Fixed Disk	512K RAM and Fixed Disk	512K RAM & Fixed Disk	640K RAM & Fixed Disk	2MB RAM & Fixed Disk	4MB expanded/15MB disk
COST								
Program	$1300 list	$2899 Single User $4090 1 Network User $6395 5 Network Users	$199	$37.55	$195	$495	Class A $89 Class B $49 Inc. manual	$1495 Direct Deposit $995
Updates & Maintenance	$395 per yr	$395 SU [illegible]	First Year [illegible]	$300	$99.95	$795 per yr	Class A Included	$395
Support	$225	Included	No charge	Included	Included	Included	Class A Included Annual costs $250K	1 Year Free
HELP								
On Line Help	Y	Y	Y	Y	Y	Y	Y	Y
Tutorial or Sample Company	Y	Y	Y	N	Y	Y	Y	Y
Telephone Support Available	Y	Y	Y	Y	Y	Y	Y	Y
Sample Reports Available	Y	Y	Y	N	Y	Y	Y	Y
Install & Training Available	Y	Y	Y	Y	Y	Y	Y	Y
FEATURES								
Multiple Companies	Y	Y	Y	N	Y	Y	N	Y
General Ledger Departments	Y	Y	Y	N	Y	Y	Y	Y
Job Costing	Y	Y	N (Second)	N	N Interface only	Limited	N	Additional Module
Multi Provincial	Y	Y	Y	Y	Y	Y	Y	Y
Multiuser/Network	Y	Y		N	Y	Y	Y	Y
Multi UIC Rates per Company	Y	Y	Y	N	Y	N	Y	Y
Password Protection	Y	Y	Y	Y	Y	Y	Y	Y
Interface with General Ledger	Y Accpac Plus	Y	Y	DacEasy and Quicken	Y DacEasy	Y Many	Y	Y
Number of Items per Employee								
Earnings	32 Earnings	500	7 Hourly and 12 user	5	10	40	Y	50
Taxable Benefits	and	500	definable incomes	2	5	40	2	50
Nonstatutory Deductions	Deductions	500	16	4	10	40	3	50
Automatic Calculation Formulas								
For Statutory Deductions	Y	Y	Y	Y	Y	Y	Y	Y
For Earnings	Y	Y	Y	Y	Y	Y	Y	Y
For Taxable Benefits	Y	Y	Y	Y	Y	Y	N	Y
For Nonstatutory Deductions	Y	Y	Y	Y	Y	Y	N	Y
For C[illegible] Taxable Benefit	N	Y	Y	N	N	N	N	Y
Manual Cheques	Y	Y	Y	Y	Y	Y	Y	Y
After the Fact Pay	Y	Y	Y	N	N	Y	Y	Y
[illegible] Advances	Y	Y	N	N	N	Y	Y	Y
Calculates Accruals	Y	Y	Y	Y	Y	Y	Y	Y
Banks Hours	Y	Y	Y	N	Y	Y	N	Y
[illegible] Compensation	Y	Y	Y	N	N	N	N	Y
[illegible]	Y	N	N	N	N	Y	N	Y
Retains [illegible] for Prior Years	N	N	Y	N	N	N	N	Y
[illegible]	Y	Y	Y	Y	Y	Y	N	Y
[illegible] and Additions	Y	Y	Y	N	N	Y	N	Y
[illegible]	Y	Y	Y	N	N	N	N	N
[illegible]	Y	Y	N	N	N	Y	N	Y
[illegible] for T4s	N	Y	Y	N	Y	N	N	Y
PRINTING AND REPORTS								
Prints Cheques for								
[illegible]	Y	Y	Y	Y	Y	Y	Y	Y
[illegible]	Y	Y	N	N	Y	N	N	Y
[illegible]	Y	Y	N	N	Y	Y	N	Y
[illegible] Deposits	Y	Y	Y	N	Y	Y	N	Y
[illegible]	Y	Y	Y	N	Y	Y	Y	Y
[illegible]	Y	Y	Y	N	Y	N	N	N
[illegible] Employment Form	Y	Y	Y	N	Y	Y	N	Y
[illegible]	Y	Y	Y	Y	N	Y	N	Y
Cheque Register	Y	Y	Y	Y	Y	Y	N	Y
Payroll Journal or Register	Y	Y	Y	Y	Y	Y	N	Y
Employee's Detail Pay History	Y	Y	Y	Y	Y	Y	N	Y
[illegible]	Y	Y	Y	N	Y	Y	Y	Y
Employee's Year to Date Report	Y	Y	Y	N	N	Y	N	Y
Employee Profile	Y	Y	Y	Y	Y	Y	N	Y
[illegible] Report	Y	Y	Y	Y	Y	Y	N	Y
[illegible] Earnings Report	Y	Y	Y	N	Y	Y	Y	Y
Statutory Deduction Report	Y	Y	Y	N	Y	Y	Y	Y
Other Deductions [illegible]	Y	Y	Y	N	Y	Y	N	Y
[illegible] Department Report	Y	Y	Y	N	Y	Y	N	Y
[illegible] Payroll Report	Y	Y	Y	N	N	Y	N	Y
Cheque Reconciliation Report	N	Y	Y	N	Y	Y	N	Y
[illegible]	N	Y	Y	Y	Y	Y	N	Y
PERFORMANCE								
Auto Install of Software	Y	Y	Y	Y	Y	Y	Y	Y
Ease of Setup	Complex but easy	Easy. Formulae complex	Very simple	Easy	Easy	Easy	Easy	Complex but easy
Ease of Use	Easy	Easy	Very easy	Easy	Easy	Easy	Easy	Easy
Ease of Adjustment	Easy	Easy	Very easy	Easy	Easy	Easy	Easy	Easy
Programmed Backup & Restore	N	N	Y	Y	Y	Y	Y	Y
Menus Appearance	Clear logical organization	Clear	Macintosh	Pull down	Pull down	Good	Clear	Pull down
Data Entry Screen Appearance	Good	Clear	Macintosh	Clear some clutter	Clear, easy to follow	Clear	Clear	Good
General Flexibility	Excellent	Excellent	Good	Good	Good	Good	Good	Excellent
Reporting Flexibility	Good	Excellent	Some	None	None	Good	None	Excellent

GREAT PLAINS Canadian Payroll	HELP	IMS Payroll for Windows	ONE-WRITE PLUS	PAY-CALC	PAYROLL CONTROLLER IV	PAYMATE Simple V 5.4a	POWERPAY
V7.0a	V 3.0 ... 3.07	V3.0 Jan 1994	Ver 4.0 June 1994	Ver 6.0	Ver 1.0	ADV V 5.3a PLUS V 5.3a	V 2.32 (1994)
Great Plains Software	Help Software Services Ltd.	IMS Information Systems Inc.	NEBS Software Inc.	Maple Software Ltd.	Allan Gil[illegible]	AB Microsystems	PowerSoft Systems Ltd. Vancouver and Toronto
1701 Southwest 38 St Fargo North Dakota, 58103	200 Fulford - Ganges Rd. Salt Spring Island, B.C. V8K 2K7	101 - 3070 Government St. Penticton, B.C. V2A 4W6	330 Cranston Crescent Midland, Ont. L4R 4V9	234 Glenridge Ave. Suite 11 St. Catharines, Ont. L2T 3K2	2146 Sherwood Cresc. Abbotsford BC V2T 1A6	201-80 Fulton Way Richmond Hill, Ont. L4B 1J5	103-13880 104th Ave Surrey, BC V3R 2Y9
701-281-0550	1-800-663-4712	1-800-665-4236	1-800-461-7372	905-984-3131	604-852-7375	905-731-1155	604-583-7400/1-800-663-1400
701-282-4826	604-537-4830	604-490-8227	1-800-461-3378		604-852-7316	905-731-1344	604-583-7399/1-800-663-2030
	1-800-663-4712	604-490-8177			[illegible]		
DOS 3.1, OS/2, MAC, UNIX, XENIX, Windows 3.0	DOS 2.0	Windows 3.1	DOS 3.3	DOS	DOS, Unix, Xenix	DOS 3.3	DOS 2.0
PC or MAC	PC	PC	PC, 640K RAM	PC, 640K RAM	PC	PC	PC
640K RAM & Fixed Disk	256K RAM Fixed Disk	Fixed Disk	Fixed Disk	High Density Disk Drive	640K RAM, Hard Disk	640K RAM, Fixed Disk	512K RAM & Fixed Disk
$966	$149.95	$495	$99.95	$160 0 - 50 Employees $995 51 - 100 Employees	$895 Single User $975	$39 < 10 Employees $139 < 20 Employees $400 20 Employees	$99 Single $252 Multiple Co.
$330	$50 if required	$49.95 per year	$49.95	$100	$295	$49-$107/$92-$528	$50 Single/$100 Multi
Various plans	Free	Support is free	30 days free	Free	Free	$995.20	No charge
Y	Y	Y	Y	Y	Y	Y	Y
Y	N	Y	N	Y	Y	Y	N
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	N	Y	N
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	N/Y/Y	N/Y
Y	Y	Y	Y	Y	Y	N/Y/Y	Y
Y	Y	N	N	N	Y	N/Y/Y	N
Y	Y	Y	Y	Y	Y	Y	Y
Y	S/P	N	N	N	Y	N	N
Y	N	Y	N	Y	Y	N/Y/Y	N
Y	Y	Y	Y	Y	Y	Y	N
Y	Y Many	Y	Y	N	Y	Y Many	Y
Unlimited	10	50	8	9	Unlimited	70/ ?	9
Unlimited	6	5	5	9 Benefits &	Unlimited	2/26	6
Unlimited	10	15	2+3 special	Deductions	Unlimited	32/99	8
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	N	N	Y	Y	N
Y	Y	Y	Y	Y	Y	N/Y/Y	N
Y	Y	Y	Y	Y	Y	N/Y/Y	N
N	N	N	N	Y	Y	N	Y
Y	Y	ADVANCES ONLY	N	N	Y	Y	N
Y	Y	N	N	N	Y	Y	N
Y	Y	Y	N	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	N	N	N	Y	Y	N	N
Y	N	N	N	Y	Y	N	Y
Y	N	N	N	N	Y	Y	N
Y Summary, 1 year	Y cheque	Y	Y	Y	N	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	N	Y	Y	N/Y/Y	N
N	Y	N	N	N	N	N	N
Additional Module	N	N	N	N	Y	N/A/Y	N
N	N	N	N	N	N	N	N
Y	Y	Y	Y	Y	Y	Y	Y
N	Y	N	N	N	N	N	N
N	Y	N	N	N	N	N	N
Y	Y	Y	Y	N	N	Y	N
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	N	N	Y	N
Y	Y	Y	N	N	Y	N/A/Y	N
Y	Y	Y	Y	Y	Y	Y	N
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	Y
Y	Y	Y	Y	Y	Y	Y	N
Y	Y	Y	N	Y	Y	Y	N
Y	Y	N	Y	Y	Y	Y	Y
Y	Y	N	Y	N	Y	Y	N
Y	Y	N	Y	N	Y	N/Dependent Cost	N
N	N	N	N	N	Y	N/A/Y	N
N	N	N	N	Y	Y	Y	N
N	N	N	N	N	N	N	N
Y	Y	Y	Y	Y	Y	Y	Y
Moderately Difficult	Y	Easy	Easy	Easy	Difficult	Extremely easy	Easy
Simple	Easy	Easy	Awkward	Easy	Easy	Extremely easy	Easy
Easy	Easy	Easy	Not Easy	Fairly Easy	Easy	Easy	Not easy
N	Y	Y	Y	Y	N	Y	N
Clear	Good	Windows	Pull down	Clear but outdated	Clear but outdated	Excellent Pull Down	Clear
Clear	Good	Windows	Clear	Clear but outdated	Clear but outdated	Very Clear	OK
Excellent	Good	Good	Good	Good	Excellent	Good	None
Excellent	Good	Same	Same	None	Same	Same	None

Table Legend

The accompanying chart represents an attempt to compare costs, services, features and options for the programs. Where information was not available the cell contains a dash. Some features are described here for clarification.

On Line Help means the product provides the user with additional information during data entry if a key or combination of keys is pressed.

Tutorial refers to training material, either on disk or in a training section in the manual.

Telephone Support Available means the user can call the software company (usually at the user's expense) and ask for assistance. Many companies now provide a fax number for written requests for help.

Install & Training Available means this service is provided either by the software company or by a third party whose name and telephone number are available from the company.

Multiple Companies. If "Y" the payroll can be processed for more than one company; otherwise, the user is restricted to a single company.

Job Costing means that the program will record units of time and amounts to a job and provide job cost reports. The more complex products also calculate and expense benefits and other overhead to the job.

Multi UIC Rates per Company means the program can calculate more than one UIC rate per company if more than one Revenue Canada number is required.

Exports to General Ledgers. Most payrolls provide a General Ledger report or a General Ledger interface text file that contains journal entries summarized by account number, department number and amounts.

Number of Items per Employee. Many products have a limited number of earnings, benefits and non statutory deductions available per company or employee.

Automatic Calculation Formulae are user definable formulae for the calculation of earnings such as vacation accruals, commissions or piece work, and non statutory deductions which are calculated on selected earnings or groups of earnings or other amounts.

Manual Cheques. Many payroll programs provide for the entry of manual cheques which have been prepared between payroll runs.

After the Fact Pay. This feature provides for entry of data after a manual cheque has been written.

Tracks Advances and **Calculates Accruals.** Programs that track advances and accruals maintain a record of an advance paid or an accrual such as holiday pay until it is deducted or paid out.

Banks Hours. A feature in some programs is the capability of banking hours or units for sick pay or time off.

Calculates Workers Compensation. Some payrolls will calculate the amount due to Workers Compensation.

Automatic Indexing. Automatic indexing of employees TD1 claim by the annual cost of living adjustment is now a feature included in some payrolls.

Direct Deposit Interface. A file can be sent to the bank for direct entry into the bank's direct deposit system.

Printing and Reports. Some payrolls will not print directly on all government forms. As an alternative they print a report that can be transcribed onto the government form.

Detailed Pay History Report. This report lists each earning and deduction for each employee by pay period and totals to the year to date total.

Year to Date Report. This report shows the year to date amount of all earnings, benefits and deductions for each employee.

Employee Profile is a report showing employee name, address, birth date, start date and other personnel information.

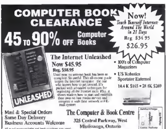
Direct Deposit Report. Some payrolls prepare a report for the bank showing the amount of the deposit and the employee's bank account number.

Auto Install of Software. If "Y" there is a program on the program disk that creates the sub-directories and copies the program files onto the fixed disk.

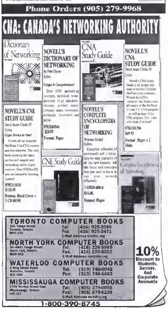
Ease of Setup. When a payroll is easy to set up the user can quickly configure the pay frequencies and the earnings and deductions or they are pre-configured.

Ease of Use. In easy-to-use payroll programs the process of entering time sheets and calculating the payroll is very simple and straightforward and look-up boxes are available for the selection of data to enter.

Menu Appearance. Pull-down menus are features of the newer products. They are easy to use and easy on the eyes. Color is also considered here.



COMPUTER BOOK CLEARANCE
45 TO 90% OFF Computer Books
Now! Teach Yourself Internet: Around The World in 21 Days Reg $34 95 $26.95
The Internet Unleashed
Now $45.95
Reg. $58.95
Until now no internet book has been so complete. So useful. This all-in-one guide targets the Internet navigator - the one who knows how to get around. It's packed with advanced techniques for exploiting all the Internet tools. Plus, it shows readers how to start and maintain their own on line media service and integrate it with their network and E-mail system
• 100's of Computer Magazines
• US Robotics Sportster External
14.4 K $165 • 28.8K $269
Mail & Special Orders
Same Day Delivery
Business Accounts Welcome
The Computer & Book Centre
325 Central Parkway, West
Mississauga, Ontario
Phone Orders (905) 279-9968



CNA: CANADA'S NETWORKING AUTHORITY

NOVELL'S DICTIONARY OF NETWORKING
by Peter Dyson
Sybex
Unique & Comprehensive!
Over 1700 networking concepts, technical terms, protocols, chips, standards, versions, product names, company names, commands, acronyms, buzzwords and jargon.
0782114946
$24.95
Format: Paper

NOVELL'S CNA STUDY GUIDE
David James Clarke IV
Sybex
Novell's CNA Study Guide is for people who want to become Certified NetWare Administrators. Written by a CNA instructor this book covers all aspects of the NetWare 2.2 and 3.11 CNA programs as well as most of the CNE program. This is the only book of its kind!
0782111394
$69.95
Format: Paper + 2 Disks

NOVELL'S CNE STUDY GUIDE
David James Clarke IV
Sybex
Eight Books in One!
Covers all six required NetWare 3.1x CNE courses and two electives. The only book covering the latest service and support and networking technologies material. Free NSEPro CD plus an interactive learning system!
0782115030
$125.00
Format: Hard Cover + 1 CD ROM

NOVELL'S COMPLETE ENCYCLOPEDIA OF NETWORKING
Werner Feibel
Sybex
Complete reference of commands and utilities. Step-by-step examples of all the new features. All the facts and concepts that you need to know to use your network efficiently
1-55828-400-1
$55.00
Format: Paper

TORONTO COMPUTER BOOKS
835 Yonge Street
Toronto, Ontario
M4Y 1Y4
Tel: (416) 925-2088
Fax: (416) 925-3471
E-Mail Address tcb@io.org

NORTH YORK COMPUTER BOOKS
35-4841 Yonge Street
North York, Ontario
M2N 5X2
Tel: (416) 226-9989
Fax: (416) 226-6212
E-Mail Address nycb@io.org

WATERLOO COMPUTER BOOKS
1 King Street North
Waterloo, Ontario
N2J 2W8
Tel: (519) 746-6042
Fax: (519) 746-6883

MISSISSAUGA COMPUTER BOOKS
1708 Dundas Street East
Mississauga, Ontario
L4X 1L7
Tel: (905) 279-6055
Fax: (905) 279-6239
E-Mail Address mcb@io.org

10% Discount to Students, Seniors, And Corporate Accounts

1-800-390-8745

book*review*

Top 10 Computer Books of 1994

BY KEITH SCHENGILI-ROBERTS

Here's a round-up of some of the best books this reviewer has seen over the past year. While there's still some time before the year ends, and there are undoubtedly titles still to come that might otherwise make this list, it will be hard for most people to go wrong with these titles listed here.

An acronym has emerged from the computer publishing world this year: YAEATI. It stands for "Yet Another Book About the Internet." There are many books about the Internet but few which stand out from the crowd. There are two books, however (*The Whole Internet User's Guide and Catalog, 2nd Edition* and *The Canadian Internet Handbook 1994 Edition*) that deserve places in the top 10 this year. Both are well written, thorough and actually useful when trying to traverse the Internet. A third book, *The Mosaic Handbook*, is the first of what is bound to be the next wave of YAEATI titles: books that explain how to use some of the best tools available for exploring the Internet.

As the computer industry matures, expect to see more retrospective books on the subject. *The Best of BYTE* and *Insanely Great* are two titles that stand out in this category. As computers and operating systems become more complicated, there will be room for good books explaining them, like *Inside the Power PC Revolution* and *Inside Windows 95*, which take the time to explain the nitty gritty details to the more technically inclined reader. As CD-ROMs become more and more popular, expect to see more "books" like *Jamsa's C++ Multimedia Trilogy* appear on CD-ROM. There will always be space available for well written, easily understandable books, and that's where the rest of this year's top 10 titles fit in.

1 *The Canadian Internet Handbook 1994 Edition*

Authors: Jim Carroll and Rick Broadhead
Price: $16.95

This small book became a best seller this year, and deservedly so. Packed with useful information, this handbook has become a fixture on any desktop. There is a wealth of information on the Internet in Canada. It lists all the Internet providers available to Canadians at the time it went to press, and it has directories relevant to Canadian Internet users. It is a good, useful handbook on the Internet, giving you the basics of how to use such Internet tools and services as e-mail, ftp, telnet, gopher, Mosaic and several other tools. *The Canadian Internet Handbook* calls itself the "Definitive Guide to the Internet in Canada." It is. For most people who are using or are planning to use the Internet, this is probably the only book they'll ever need. Until next year, that is...

Contact: Prentice Hall Canada Inc. (416) 293-3621

2 *The Whole Internet User's Guide and Catalog, 2nd Edition*

Author: Ed Krol
Publisher: O'Reilly & Associates
Price: US$24.95

The first edition of this book was one of the best computer books put out last year. The second edition greatly expands on the original, adding over 200 pages of fresh material covering the latest on the Internet topics. Many new tools are covered in this edition, and Ed Krol's writing style manages to inform the reader about the various tools available on the Internet, giving you a "feel" for how the Internet works. In short, it is well written and thorough, like most of the books put out by O'Reilly & Associates. Still among the best books available on the Internet, this title should definitely be near the top of your shopping list of Internet books to get.

Contact: O'Reilly & Associates, Inc. 1-800-998-9938

3 Inside the PowerPC Revolution

Authors: Jeff Duntemann and Ron Pronk
Publisher: Coriolis Group Books
Price: $34.95

This is an exceptional book for people who want to know what's going on with the new PowerPCs. This book not only looks at the nitty gritty details of how the PowerPC microchips function, but is also looks at the deals made between IBM, Apple and Motorola that led to this joint effort. The authors analyse why each corporation joined in this collaborative effort, and chart the course each is likely to take with the technology that goes into making the PowerPC microchips. The book also takes a good look at the competition, and checks out the strengths and deficiencies of Intel's Pentium and Cyrix' M1 microprocessors. Far from being a one-sided endorsement for the PowerPC microprocessor, this is a careful evaluation of the technical and business decisions that were made before the chip went into production.

The technical level of this book will restrict its audience, but if you are contemplating the move from a Mac or PC to a PowerMac or PowerPC you will find this interesting reading.

Contact: Macmillan Canada (416) 293-8141

4 *The Best of BYTE: Two Decades on the Leading Edge*

Edited by: Jay Ranada and Alan Nash
Publisher: McGraw-Hill Inc.
Price: $35.95

➤

book*review*

BYTE has always been at the forefront of computer magazines, publishing stories for the more technically inclined computer user. This book puts the past two decades of personal computing into perspective, and provides an eye-opening look at the development of the minicomputer revolution that began at the same time *BYTE* was born.

It contains seminal articles on programming and programming techniques that continue to be a useful reference for programmers today. Older computer users will enjoy reading the articles and advertisements for long-dead computers, and more recent computer users will appreciate the perspective the book gives on the computer industry. A useful reference and an enjoyable read, you will like this book if you are a regular reader of *BYTE*.

Contact: McGraw Hill Inc. 1-800 565-5758

5 *Inside Windows 95*

Author: Adrian King
Publisher: Microsoft Press
Price: $33.95

This is a unique book, as the software it describes is not planned to be released until sometime well into 1995. But the architecture for Chicago a.k.a. Windows 4.0 a.k.a. Windows 95 has already been laid down and beta versions of the program are showing that there is substance behind the hype. This book goes behind the scenes and looks at the development process of Windows 95 and looks at the details of this operating system-to-be.

This book would have had a higher ranking if the author had been more critical. The author tends to gloss over any potential deficiencies, and instead opts for a grand tour of Windows 95. But for anybody interested in taking a fairly detailed look at the many features that will appear in Windows 95, this is the book to get.

Contact: Macmillan Canada (416) 293-8141

6 *Insanely Great: The Life and Times of Macintosh, the Computer that Changed Everything*

Author: Steven Levy
Publisher: Viking Penguin
Price: $25.99

Released on the 10th anniversary of the original Macintosh computer, this book is a refreshing look at how the people at Apple redefined personal computing. "Insanely Great." was the term Steve Jobs gave to the Macintosh, and while in retrospect it is safe to say that the Mac and its operating system fits this description, the Mac's success was far from being a sure thing.

Part of the reason why Steve Jobs was let go from Apple was because he refused to face the reality that the Mac was not selling as it was supposed to. The original Mac was expensive, underpowered, tended to overheat and had no facility for expansion. The Mac's fortune was assured when, in 1985, PageMaker was released, the "killer app" that made the Macintosh the de facto computer for desktop publishing. This book looks at the people and the processes behind this "insanely great" computer, and its effects on the entire computing industry.

7 *The Mosaic Handbook for Microsoft Windows*

(Editions available for X Windows and Macintosh)
Author: Dale Dougherty and Richard Koman
Publisher: O'Reilly & Associates
Price: $43.95 (Suggested)

The first in what will likely be the next wave in Internet instructions to get people up and running on one of the best Internet applications available, Mosaic. Easy to read, the book gets the user started quickly with the version of Enhanced Mosaic that is provided. The book fails to go into any detail about setting up the SLIP or PPP connection necessary to run the program. Despite this shortcoming, it is a very good place for many Internet "surfers" to start.

(For more information on this title, see the full review that appears in this issue.)

Contact: O'Reilly & Associates

8 *Jamsa's C++ Multimedia Trilogy CD ROM*

Manufacturer: Jamsa Press
System Requirements: Multimedia PC
Price: $84.95

While not strictly speaking a "book," this CD ROM may be the first of many CD ROMs that render printed books obsolete. This is not just the text of the book accompanied by a few sample files, but the full text of three books accompanied by videos by Kris Jamsa, walking you through the instructions contained in his books. If you find yourself nodding off while reading the text, you can always bring up a multimedia Kris Jamsa to explain things further.

To get the most out of this package you will want to have some sort of C++ compiler handy so that you can watch how your sample programs execute. Installation is easy and it does not exact a premium on hard drive space. While for many people this type of instruction does not beat sitting in a classroom and learning everything bit by bit from a real, live instructor, instruction by CD ROM is a real option for those who can't invest in the time needed to go to a local college every week. How long before we see more "books" like this?

Contact: John Wiley & Sons Canada Limited
(416) 675-3580

9 A Short Course on Computer Viruses, 2nd Edition

Author: Dr. Frederick B. Cohen
Publisher: John Wiley & Sons
Price: $62.95
Softcover: 250 pages, 1994

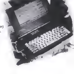
While viruses haven't been in the news lately, they are still a going concern. *A Short Course on Computer Viruses*, written by the man who coined the term, is easily one of the best books available on the subject.

Continued on page **105**

YEAR END
BOOK SALE
HALF-PRICE OR LESS!
December 10th, 17th, 29th 1994
10:00am to 5:00pm at CPIC Technical Bookstore
4580 Eastgate Drive, Unit 11, Mississauga, Ontario
(1 block east of Dixie Road, south of Eglinton - Call 905 624-1058)
HUGE SAVINGS ON: Computer Books
Hobby, Craft, and Home Repair Titles - Woodworking Books
Technical & Engineering - Business & Professional Books
Health and Fitness Titles - and General Interest Books
Visa + Mastercard + AMEX Are Welcome

Control your lights, stereo, anything from your PC!
Advanced Home Automation Inc.
Computer interfaces for X-10 and infrared control (starting at $79.99)
Uses your existing house wiring
Ask about our custom home automation systems
Voice: 1-800-265-[illegible] or (905) 655-5355 BBS: (905) 655-5744 Free!
See us at the Ontario Computer Fair in Whitby November 20th. Get details and discount coupons on our BBS

LEXMARK'S new sub-notebook
with a touch-typing sized keyboard
ROM contains DOS, Stacker & Ability Plus 2
Ability Plus 2 is an Integrated Word Processor
Relational Database, Spreadsheet, Graph Maker, Telephone
Communications and File Management Program.
Imports/Exports From/To Other Popular Programs
RAM has the equivalent of 4 MB (using built-in Stacker)
2 PCMCIA Type II slots can give lots of added Storage.
Weighs just 2.2 lbs. Size 10" x 8.5" x 1.25"
Optional 2400/9600 Baud Data/Fax Modem
$789
RHODES ASSOCIATES 95 Catalina Drive, Scarborough, M1M 1K7 (416) 464-9171



Power of Choice
Authorized Dealer
ALR, AST, Brother, Canon, Epson, Hewlett Packard, IBM, Impulse, Lexmark, NEC, Okidata, Panasonic, QMS, Raven, Texas Instruments, Toshiba & More.
NOTEBOOKS
[illegible]
DESKTOPS
[illegible]
CPlus Systems
[illegible]
Cplus 486DX2/66(VLB) [illegible]
Cplus Pentium 60(PCI) $2795
Cplus Pentium 66(PCI) [illegible]
Cplus Pentium 90(PCI) $3195
- Sales & Service
- Upgrades & Support
- Custom Configurations
- Computer Rentals
- Network Installations
- Financing Available
PRINTERS
[illegible]
PERIPHERALS
[illegible]
Compatibles Plus Inc.
Ph.(416)487-5050 Fax.(416)487 5579
138 Redpath Ave. Toronto ON M4P 2K4 2 blocks East of Yonge North of Eglinton

NOTEBOOK UPGRADE
MEMORY & HARD DISK UPGRADE FOR:
IBM-MACINTOSH-COMPAQ-HP/TOSHIBA-AST-NEC-WYSE-SUN-TI-DELL
BRAND NAME NOTEBOOK, DESKTOP & LASER PRINTER
GARANTEED LOWEST PRICES IN CANADA
Certified REPAIR
REPAIRS TO YOUR NOTEBOOK, PC AND MAC
EMERGENCY PICKUP
COST EFFECTIVE
DIAGNOSTIC AND ESTIMATE $10
Canada's leading high tech data recovery
Highest success rate (85%-100%)
No Data, No charge [illegible]
Charges from $90
DATA RECOVERY
Corp Computer Centre Ltd.
A TOTAL SERVICE COMPANY
2307 Finch Ave. W. 7a. Tel. (416) 728 7176

G.C.S. G.C. SYSTEMS TEL. (905) 890-0253 TOR. (416) 219-3683 FAX. (905) 890-[illegible]
151 BRUNEL RD., UNIT 13, MISSISSAUGA, ONTARIO CANADA L4Z 3P6
LIMITED TIME OFFER WHILE QUANTITIES LAST!

Main Board W/CPU
386 DX-40 W/128 Cache $132
486 DX-33 W/128 Cache VESA Local Bus $262
486 SX-25 W/128 Cache VESA Local Bus $194
486 DX-40 W/128 Cache VESA Local Bus $314
486 DX2-66 W/128 Cache VESA Local Bus $385

Hard Drive
Maxtor 340MB IDE $213
Conner/Maxtor 420MB IDE $260
Maxtor/Quantum 540 MB IDE $295
Western Digital 1 GIG IDE $640
Please ask for our complete systems 386 to 486

VOLUME DISCOUNTS & FREE DELIVERY ALSO AVAILABLE • PLEASE CONTACT OUR SALES OFFICE FOR DETAILS • PRICES SUBJECT TO CHANGE WITHOUT NOTICE
DEALERS ONLY
SEASONS SPECIALS!

BICMOS TRADING INT'L
Guarante best price in Canada !!
BiCMOS 486DX-40MHz $ 1333
BiCMOS 486DX2-66MHz $ 1398
Pentium 60/66MHz $1869/2010
All above systems including:
[illegible]
2 years parts & labour limited warranty

Special of the month
PENTIUM 90MHz PCI/VLB/ISA
The powerful machine your dreaming machine!
512K External cache 16MB RAM(70ns)
1.44M FD PCI IDE Controller Multi I/O
ATI Mach 64 bit PCI w/2M VRAM
15" SVGA Color Monitor .28dpi
420M Hard Drive 101 Enhanced Keyboard
Mini Tower case MS DOS 6.22
Windows 3.11 Mouse & Pad
Heat Sink & CPU Fan
ONLY $3699
LIMITED QUANTITY!
2 years parts & labour limited warranty

1.44M Pre-formatted Disk $4.15
GVC 16 Sound Card w/MCD $115
Sollrix Sound Card w/speaker $39
PATH 14.4K Int. Fax Modem w/voice $115
Mitsumi CD ROM (double speed) $180
Ms Encarta Multimedia $75

Multimedia Package
GVC 16 bit Sound Card w/MCD
Mitsumi Double Speed CD ROM
Amplified Stereo Speakers
Deluxe Microphone
MS ENCARTA
MS WORKS 3.0
MS MONEY
$ 389

Mississauga Office:
2550 Goldenridge Rd., #64
Mississauga, Ont.
L4X 2S3
Tel: (905)-279-5038
Fax: (905)-279-9241

Toronto Office:
151 Amber St., #1
Markham, Ontario
L3R 3B3
Tel: (905)-470-2025
Fax:(905)-470-2201

* Prices are subject to change without notice. FINANCING AVAILABLE NOW !!

book*review*

E-mail Style Guide Promotes Good Writing

BY KEITH SCHENGILI ROBERTS

Title *The Elements of E-mail Style: Communicate Effectively via Electronic Mail*
Author David Angell and Brent Heslop
Publisher Addison-Wesley Publishing
Price. $16.95
Softcover 157 pages 1994

Only a few years ago people from the academic community were complaining about the death of the fine art of letter-writing. Now thanks to e-mail, the art of writing has made a dramatic resurgence in popularity. Gigabytes of text are transferred electronically around the globe every day.

Even a casual glance through these files shows that there are very few electronically-inclined bards out there and most people find it hard to get their point across in one message. That's where this book comes in. Based on the classic *The Elements of Style* by Strunk and White, it updates the original for the electronic age.

The original *Elements of Style* stresses accuracy, brevity and "cleanliness" in the use of written English. Produced around the turn of the century, it concentrated on the basic principles of composition and provided examples of the most commonly misused words and expressions. It was designed primarily for use by college and university students.

The Elements of E-mail Style has a similar tack, although its audience consists of anybody who can use technology for a purpose not even dreamed about when the original book was written. Despite that, much of what's in the original book by Strunk and White carries over to this book on e-mail style.

The content of any message, as any good McLuhan-ite will tell you, is dictated by the structure of the communications medium. Just as e-mail is speedy and loosely formatted, so much of the communications that occurs by e-mail is staccato and informal in nature. Unfortunately this often leads to sloppy message-writing.

Authors Angell and Heslop stress the importance of knowing exactly what it is you want to convey in a message before writing it, and come up with plenty of tips on ways you get your point across. There are sections dealing with how to structure your e-mail messages, how to cure "artificial illiteracy" by using tools like spell-checkers, and teaches some of the basics of English composition. There's a welcome section on how to set the tone of an e-mail message, and cautions against creating an e-mail message when angry. Cooling off for a while before sending your e-mail is the best way to avoid starting up a "flame war" where discussion groups quickly degenerate into a lot of ugly words.

One of the hallmarks of e-mail is it's freewheeling style. With that in mind you have to wonder whether or not a book that tries to impose a structure on this style is going to get anywhere. The answer is probably not. But until "bozo filters" for e-mail are created, the best way to improve the content of the messages you see on the Net is by improving your own e-mail style. This book is a good start.

Contact: Addison-Wesley Publishing 416-447-5101

AP COMPUTERS
ALPHA PLUS COMPUTERS
Upgrade Special

Mother Board (Intel CPU)
486SX/25 $175
486DX2-66 128K VLB $399
Pentium 60 256K PCI $800
Pentium 66 256K PCI $1150
Pentium 90 256K PCI $1650
Floppy Drives
Panasonic 1.44M $45
Panasonic 1.2M $58
Hard Drives (IDE)
Quantum 210M $235
Quantum 270M $265
Quantum 540M $348
Maxtor 405M $268
Maxtor 540M $338
Hard Drives (SCSI)
Quantum 270M $299
Quantum 540M $420
Seagate 1.05G $680
Memory
1M SIMM 70ns $57
4M SIMM 70ns $189

4M SIMM 70ns 72pin $199
8M SIMM 70ns 72pin $399
16M SIMM 70ns 72pin $839
Keyboard
Enhanced 101 $28
Keytronic 101 $48
Video Card
Trident 512K ISA $55
Trident 1M ISA $85
Trident 8400 VLB 1M $99
S3 1M VLB $109
Cirrus Logic 5428 VLB $128
ATI G WONDER 1M VLB $190
ATI Mach 64 Win Turbo 2M $399
ATI Mach 64 Xpression 2M $288
Diamond Viper 2M $469
Monitor
14" .28mm SVGA $255
ACER 14" .28mm NI SVGA $299
ACER 15" .28mm NI SVGA $469

MAG 15" DX 5F Flat $525
MAG 17" DX17F .26mm $965
NANAO 15" F340iW $895
NANAO 17" F550iW $1720
Fax/Modem
PC Logic 9624 Int. $58
USR Sportster 14.4 Int. $155
USR Sportster 14.4 Ext $185
USR Sportster 28.8 Int. $279
Multimedia Kit
SB Discovery CD 16 $345
Sound Blaster 16 sound card,
Panasonic D. Speed CD ROM,
CD Titles Stereo Speaker
CD ROM Drives Double Speed
Toshiba 3401 (200ms) $399
Toshiba 4101 $299
Panasonic 562 $168
Sony CDU33A $168

Prices are subject to change without notice
386 College St • Toronto Ont M5T 1S7 • Tel (416) 323-0898 FAX (416) 323-1064

bookreview

Internet Resource on Book and CD

BY KEITH SCHENGILI-ROBERTS

Title: Internet CD
Author: Vivian Neou
Publisher: Prentice Hall
Price: $64.95
Softcover 260 pages 1994

One of the most common problems about connecting to the Internet has been that you need to get the proper software tools to get the most out of an Internet account. The catch-22 is that those tools are distributed throughout the Internet, and you would already have to have them to be able to get them.

Up until now the only way out has been to learn enough of the Unix operating system to find and retrieve these tools or suffer with Unix's command-line prompts. Thanks to the Internet CD, people equipped with a CD-ROM drive can get most of the major Internet tools in one convenient package.

The book is primarily a manual for the dozens of software packages contained on the disk, and does not have much in the way of tutorials on the Internet itself. It contains Internet programs for DOS, Windows and for SunOS Unix. The CD-ROM is well laid out and by using the IFIND program on the disk, you can search for specific programs or references within a program's notes.

The program has basic Gopher, e-mail, Telnet and FTP packages for all of the computer platforms it supports. It also includes a suite of packet drivers and SLIP programs, which serve as the communications backbone the other packages need to do their magic on the Internet.

It also includes the Linux operating system, a shareware version of Unix that includes a version of X Windows (no more command line!). This is a good package to use if you want to communicate on the Internet in something like its "natural" mode, but don't even think about it unless you have some idea of how to install a finicky operating system and a spare 100MB free on your hard drive.

While all of the tools the CD-ROM supplies are top-notch shareware products, it is surprising that it is lacking one of the most popular Internet software packages widely available — Mosaic. This is a serious omission in a package that in other aspects is comprehensive.

Unfortunately there's another potential catch-22 with this book — it requires a fair bit of knowledge on how to set up and configure the software programs it contains. Many Internet programs are notorious when it comes to installing them properly, and while the book goes into great detail on the various switches and settings you can use, the language used will go over the heads of beginning users.

While not for the beginning computer user, the Internet CD is a good package for many Internet users to start with. If you feel confident enough installing software packages but aren't familiar enough with Unix commands to travel the Internet, then you should have a serious look at the Internet CD.

Contact: Prentice Hall (416) 293-3621

Top 10 Computer Books

Continued from page ***103***

Despite the dreary sounding title, this was one of the most enjoyable books to read this past year. Dr. Cohen draws the reader in with his friendly, and often humorous approach. The numerous case studies on viruses and their effects, accompanied by insightful and pragmatic analyses, make for riveting reading.

This is the first book this reviewer has seen that looks at how organizations tend to respond when a virus is found, and how their response affects the spread of a virus.

The book does have drawbacks. It is obviously derived from his lecture notes, and its many typographic errors make the book look shoddy. Despite these failings, this book should be considered essential reading for those seriously interested in computer viruses. It not only give you an idea of what you're up against, but also provides valuable information on effective defenses.

Contact: John Wiley & Sons Inc. 1-800-567-4797

10 *MS DOS 6.2 Upgrade for Dummies: The Fun and Easy Way to Install & Use the Latest MS DOS*

Author: Dan Gookin
Publisher: IDG Books
Price: $29.99

This may seem like an odd choice for the top 10 computer books list (what, another Dummies book?) but this release was significant in that Microsoft got together with IDG press to release a copy of their software along with this publication.

For anybody scared of software manuals, this release was a breath of fresh air. Most software manuals are incomprehensible to the typical user and DOS manuals are doubly so. This book is written by Dan Gookin, the instigator (and easily the best author) of the Dummies series of books. *MS DOS 6.2 Upgrade for Dummies* gently steps the novice user through installing the software, lists the most used DOS commands, and explains how to use them. Let's hope for more collaborative efforts between software manufacturers and good computer book writers in the future.

Contact: Macmillan Canada (416) 293-8141

Leap And The Net Will Appear.

Internet connections for home or office for less than $1 a day. Right now.

1 800 848-6786

NSTN INCORPORATED

CANADA'S INTERNET NAVIGATOR

? ? ? ? ? WHAT DO STUDENTS, ARCHITECTS AND ENGINEERS HAVE IN COMMON?

Call TOR to find out about our one-day intensive courses on 3D Studio!

STUDENTS! Your college or university bookstore/computer store now carries Autodesk Products!

3D Studio

THE BEST MODELING AND ANIMATION SOFTWARE FOR THE PC

RELEASE 3.0 TO 4.0 UPGRADE	$395
RELEASE 4.0 COMMERCIAL	$CALL
RELEASE 4.0 STUDENT	$849
RELEASE 2.0 CONSUMER	$595

STUDENT PRICING

Autodesk AutoCAD R12 Student	$895
Autodesk AutoCAD Designer Student	$295
Autodesk AutoCAD LT for Windows Student	$495
Borland C++ 4.0 Student (CD-ROM)	$137
Borland DBASE IV v5.0 Windows/DOS Student	$199
Lotus Smartsuite v3.0 Student	$215
Microsoft Visual Basic v3.0 Student	$99
Microsoft Visual C++ v1.0 for Win. Student	$99
Microsoft Office PRO 4.3 for Windows Student	$235
Wordperfect v6.0a for Windows Student	$165
Wordperfect v6.0 (DOS) Student	$165

3D Studio Student Offer
3D Studio 2.0 (Student Edition):
- Full version
- Hardware Lock
- World Creating Toolkit on CD-ROM

TOR Computerized Systems Inc.
160 Applewood Crescent, #14
Concord, Ontario L4K 4H2
(905) 660-3262 (800) 561-7520

Autodesk Authorized Dealer

Cash, VISA, Mastercard, AMEX or Certified Cheque with valid student ID only.
* 3D Studio R2.0: Not good for Faculty or School use. Package is locked, and not upgradable. There will be a charge for technical support.
** All prices are cash, discounted and subject to change without notice. Some restrictions may apply. Call TOR for faculty or staff pricing on software packages.

Microview Systems

Super Christmas Sale

486DX2/66 $1299
Intel CPU
Built-in Math Co Vesa L.B. P24T
128K Cache
4MB Ram 70ns
14 Non-Interlaced SVGA .28 Monitor
Vesa L.B. SVGA 1MB Video Card
260 MB IDE Hard Drive
1.44 MB Floppy Drive
Vesa L.B. Super IDE Controller (2S, 1P, 1G)
Mini-Tower Case w/ 220w PS
101 Enchanced Keyboard
MS-Compatible 3-Button Mouse
Three Years Labour & One Year Parts

Super Christmas Sale

Discovery 16 $ 359
15 CD & Software Titles
School House $ 399
20 CD & Software Titles
Game Blaster $ 549
17 CD & Software Titles
Edutainment 16 $ 599
42 CD & Software Titles
Panasonic CR562 CD-ROM
Sound Blaster 16 Basic
Dual Amplified Speakers
Mic Joystick

14" SVGA Colour $259
14" SVGA NI $309
15" SVGA NI L/R $439
Canon BJ200e $ 349
HP 4P $1299
Fax/Modem
96/24 $49 14,400 $99

System Upgrade and Repair

7725 Birchmount Road, Unit 43, Markham Tel: (905) 513-9922 Fax: (905) 513-1166

SPECIAL

TRIBUS COMPUTER
FAX 243-7020 964 Scarlett Road, Etobicoke
OPEN MON-SAT 10AM 7PM SUNDAY 12PM 5PM

243-7456

486 DX2-66
$1299
LIMITED QUANTITY

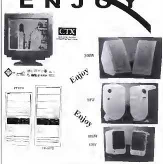
DX2-66 INTEL VESA 128K $399
540MB IDE Hard Drive 128K $299
ZOLTRIX 14400 FaxModem Int. $84
Fujitsu 1.44 Floppy $42

FOR MORE SPECIALS SEE OUR AD IN TORONTO COMPUTES!
ALL PRICES ARE CASH & CARRY AND SUBJECT TO CHANGE WITHOUT NOTICE. CONFIRM AVAILABILITY

PC FAMOUS INC.
16 Denison St., Markham, Ont. L3R 1B6 Tel. (905) 946-1618 Fax (905) 946-1961

MULTIMEDIA SPEAKER SYSTEMS

ENJOY



DEALER ENQUIRY (905) 946-1618

Canadians on Computers

BY JOHN ROBERT COLOMBO

TCP ran the first of Colombo's Canadians on Computers in our July issue, as a kind of celebration of Canada Day. For the holiday season, we present the second installment from "The Master Gatherer." — Ed

Alien Intelligence

As a nonhuman form of intelligence, the computer can help us overcome that most fundamental of human phobias — the fear of the different.

Arthur Gibson, theologian, quoted by Allen Spraggett in *The World of the Unexplained* (1974)

Artificial Intelligence

Leave an automobile in a garage unused and it will rust away to nothing without the slightest sign of impatience. And so far no computer has exhibited a will to compute until it's plugged in by a human being, and I do not see how it can acquire such a will unless computers in the future come equipped with DNA molecules and genetic codes impelling them to fight every moment for their own survival and reproduction.

Northrop Frye, literary critic, "Literature as a Critique of Pure Reason," *Myth and Metaphor: Selected Essays 1974-1988* (1990) edited by Robert D. Denham

Bits and Bytes

A computer dies slowly, a bit at a time.

Ronald Hambleton, writer and aphorist, "99 Gnomes," unpublished manuscript, 1991

Brain Power

The world already has five-billion of the finest "computers" that will ever be developed — human brains. During the past hour, 12,000 children have been born around the world, and every one of them has a potential intelligence greater than any genius alive today.

Frank Feather, futurologist, *G-Forces, Reinventing the World— The 35 Global Forces Restructuring Our World* (1989)

Communications

The only way we can live in this country is through advanced technologies of communication. We need the telephone, the telegraph, the radio, the satellite dish, TV and the computer, air travel and trains. The paradox is that these technologies do not solidify individual identity; they do not focus a singular identity for any one person.

B.W. Powe, critic, *A Tremendous Canada of Light* (1993) as reproduced in *The Toronto Star*, 11 July 1993

Cyberspace

This word was coined by Vancouver-based novelist William Gibson in his novel *Neuromancer* (1984), according to Michael L. Benedikt writing in *Cyberspace: First Steps* (1992). Cyberspace is a form of "virtual reality."

Education

The computer coupled to a printer converts every schoolchild into a publisher and reinforces the notion of writing as a communications activity rather than a dreadful and empty school exercise.

Robert K. Logan, physicist and educator, *The Alphabet Effect: The Impact of the Phonetic Alphabet on the Development of Western Civilization* (1986)

Information Processing

"The key phrase 'information processing,' was coined by Marshall McLuhan, who was asked by IBM to explain to them in succinct language what computers are all about," according to Peter Bishop in *Fifth Generation Computers* (1986)

Magic

Put the words "magic" and "computer" in the same sentence and you are likely to throw a rational person into a state of cognitive dissonance. How could magic, the essence of a shadowy world we chain off with links of logic, invade the computer, the primary expression of our rationality? The dissonance lies in the word "magic" as a symbol of the supernatural. In reality magic is a piece of the natural world, and magicians are logical folk.

A.K. Dewdney, computer specialist and columnist, *The Armchair Universe: An Exploration of Computer Worlds* (1988)

Men and Women

Computers may replace men, but they will never replace women.

Louis Dudek, poet, *Epigrams* (1975)

Poetry

The plaintive coffins no longer furnish interesting tears / Wealth and a pleasure filled with joy waste away sadness together with its roots.

Two lines of computer-written "poetry," as programmed by Jean Baudot of the computer sciences division of the University of Montreal. Quoted from the first such collection, *La Machine a Ecrire* (1964) by Jacques Vallee in *Forbidden Science* (1992) who calls such lines "some pearls of wisdom that would have enchanted Jean Cocteau."

Printing

After Gutenberg came out with print, no one went back to the graven tablet.

Frank Ogden, futurologist, explaining why he releases his words on computer disks rather than in books, 17 Nov. 1992

Reality

We are beginning to develop a very strange confusion between computer reality and reality reality. Some people would say that in the end there is no difference.

A.K. Dewdney, computer scientist and "Computer Recreations" columnist for *Scientific American*, quoted by Stephen Strauss in *The Globe and Mail*, 6 Feb. 1988

Continued on page **108**

(416) 537-2611

SBL COMPUTER PRODUCTS

SALES SERVICE RENTALS LEASING

(416) 537-2611

SOUND BLASTER AWE-32..$369.
S BLASTER 16 SCSI-2 ASP.$209.
SOUND BLASTER 16 VE...$129.
BIGMOUTH..$209.

THE PRO'S CHOICE

since 1979

Genius CAD/DTP
Hi Sketch 12x12
DIGITIZER..$269.

Genius ColorPage Scanner 120D dpi $899

COMPUTER PACKAGE DEALS!

SBL 4SX 33.$599
SBL 4DX 33.$699
SBL 4DX 50.$899
SBL 4DX2 66......$799
SBL 4DX4 100..$1399
SBL P60 FLYER..$1299
SBL P90 FLYER..$1859

Pick your Processor INTEL, AMD CYRIX, TI

SYSTEMS HAVE.
- 4 MB 60ns SIMM
- 128/256/512K Cache
- One 1.44 MB 3.5" Drive
- 101 Honeywell Keyboard
- IDE HD/FDD Controller
- Parallel, 2 Serial, Game
- 230 Watt Power Supply
- Assembled & Tested-48Hr
- Mini Tower Case w LED's
- One Year Warranty CSA
- **OPTIONAL** MONITOR, HARD DRIVE & VIDEO CARD

Intel DX2-66 OverDrive Processor $299.

CORELDRAW 5.0 $249.

DISRETTE DRIVES Fujitsu~Panasonic~TEAC

Panasonic 3.5" 1.44 MB Diskette Drive....$49
TEAC Dual Drive 1.2/1.44 5"/3" ..$169
3.5" 2.88 MB Diskette Drive. $99
Panasonic 1.2 MB 5.25" Drive $63

IBM LEXMARK ExecJet IIC Color InkJet Printer - $479.

HARD DRIVES & CONTROLLERS ~ IDE & SCSI

FUJITSU 530MB 12ms 256K IDE ...$319
QUANTUM 210MB 14ms 64K IDE....$249
MAXTOR 345MB 15ms 64K IDE..... $269
CONNOR 420MB 14ms 32K IDE $299
IBM 364MB 12ms 96K IDE $269
MAXTOR 546MB 12ms 256K IDE... $349
CONNOR 810MB 10ms 256K IDE.... $599
SEAGATE 1.05GB 10ms 256K SCSI..... $849
WDC 1.05GB 10ms 128K Enhanced IDE $769
FUJITSU 1083MB 9ms 256K SCSI-2 ...$789
EMPIRE 1080MB 9ms 512K SCSI $929
SEAGATE 420MB 14ms 128K Enh IDE.$329
SEAGATE 456MB 12ms 256K SCSI...$345
FUJITSU 530MB 10ms 256K SCSI-2...$359
QUANTUM 2.1GB 10ms 512K SCSI. $1399
EXTERNAL SCSI HD Parallel Kit w SW...$189
PROMISE SuperCache VL IDE/FDD..$179
ADAPTEC 15/28/29 SCSI-2/3.....$CALL

CASES & POWER SUPPLIES & REYBOARDS

Mini Tower/DeskTop w 230W CSA... $69
Honeywell/Keytronics 101 Enhanced ..$39
Full Tower 300W 10 Bays 2 Fans. $189
E0120 Ext HD Case HH 45W SCSI-2 ...$169

MEMORY UPGRADES - COMPUTERS & HP LASERS

4 MB x 9 SIMM 60ns 30 Pin $209
8 MB x 9 SIMM 70ns 72 Pin x 36...$439
16 MB x 9 SIMM 70ns 72 Pin x 36 $749
1 MB x 9 SIMM 60ns 30 Pin ..$59
4 MB x 9 SIMM 70ns 72 Pin x 36... $229
HP POSTSCRIPT/MEMORY Upgrade $CALL

CO/PROCESSORS/UPGRADES Intel~Cyrix~LAVA

Intel Pentium 60/66/90 MHz from.$599
16550 UART Serial Board (1 port) .. $25
Cyrix 387/SX/DX/33/40...$79/$89
Intel 486/DX/2/4, 33 to 100 $CALL

MULTIMEDIA/CD ROM & REMOVABLE MEDIA DRIVES

PIONEER 602X 6 Disc Ext CD ROM.... $659
PLEXTOR I CD 220ms 600KB 1M Quad $669
Game BLASTER CD 16 Int Omni $499
Sound BLASTER Discovery CD16 15 titles..$329
NEC MultiSpin **3Xe** CD ROM SCSI $699
NEC MultiSpin **3Xi** CD ROM SCSI.. $635
SONY 33A Int CD ROM Kit MS .$189
Toshiba 3401B Int 200ms SCSI-2.....$489

MODEMS ~ FAX-BACR ~ VOICE MAIL ~ LINE SWITCHES

BOCA 14.4 Int MultiMedia FAX BACK/Modem v.42bis MNP5 Group3 Class1/2. $239
GVC 14.4 Internal S/R FAX/Modem DOS/Windows V.42/32bis/MNP5 57,600bps... .$119
BOCA 28.8 Internal S/R FAX/Modem DOS/Windows V.42/32bis/MNP5 115.2Kbps.. $199
BOCA 28.8 External S/R FAX/Modem w 16550 Card V.42/32bis/MNP5 115.2Kbps...$229

TAPE DRIVES Archive~IOMEGA~Colorado~Connor

Colorado JUMBO 250MB Int Tape Drive ..$229
CONNOR 250MB Int Tape Drive ... $219

VIDEO / TV CARDS

ATI GRAPHICS PRO TURBO 1280x1024, 64 bit, 100Hz, 4MB, 16.7M Colors, PCI .$699.00
ATI GRAPHICS XPRESSION 1280x1024, 64 bit, 75Hz, 2MB, 16.7M Colors, ISA. $299.00
MOVIE MAN FULL-Motion VIDEO/Audio & TV, 2M Colors Video Animation .$299.00
CREATIVE TV Coder VGA to Video/TV NTSC/PAL Solution 640x480 256Colors..$189.00
ATI Graphics Wonder MACH32 Windows Accelerator 1280x1024 1MB 16M Colors ISA/VLB..$189.00
CIRRUS LOGIC 1MB, VESA Local Bus, 1280x1024, NI, 72Hz, 16M Colors.....$129.00
ATI Graphics **ULTRA Pro** 1280x1024, 2MB, NI, 76Hz, VESA LB 16.7M Colors $289.00

POINT OF SALE ~ BAR CODE & CREDIT CARD READERS +

Key Board Wedge WAND Scanner...... $329.00
STAR 4.5" SERIAL POS PRINTER....$475.00
CREDIT/HEALTH CARD READER. .. $275.00
CCD HAND LASER SCANNER....... $499.00
POS CASH DRAWER w Dual LOCK....$209.00
BarCode Print Utility Software DOS .$29.00
POS KEYBOARD, 44 Key Prog.......$195.00
POS ACCOUNTING Software.... $275.00

HIGH-SPEED MULTI I/O, MEMORY, FANS, MOUSE

RAMpAT! AT PLUS RAM Board 0K->16MB, SIMMS, EMS 4.0, 286/386/486 ... $139.00
KEYTRONIC or MICROSOFT (OEM) SERIAL MOUSE/3B w Adaptor & SW/2B.....$19.00/$39.00
LAVA COMPLETE-SS 16 bit IDE, FDD, 2 Serial (16550 UART), 2 Parallel $69.99
UN-1075 AT I/O, 2 Serial, Parallel, FDD, Game, HD IDE, w Cables.. $19.99
PROMISE 2300+ VLB 2 High-Speed Serial 1P G FDD FAST ATA Enhanced IDE(4) Cables.. $99.99
HFA-015 486 PROCESSOR HEAT SINK & FAN with Connector Cable $14.99

NETWORKS ~ NOVELL & LANtastic

SMC Elite 16C Ultra Ethernet Card. $149
LANtastic AI DOS/Windows ver 6.0.... $89
NOVELL Personal Netware v1.0 $99
Gateway 16 bit COAX EtherNet Card $49

MAINBOARDS~386/486/Pentium (ISA/VESA/EISA/PCI)

UC4G/2372 486SX/DX, ISA/VESA, ZIF, UMC AMI, 256K Cache Exp>64MB SIMM. $139.00
SA486VP 486SX/DX, ISA/VESA/PCI ZIF 256K Cache, Exp>128MB SIMM. $329.00
SA486PAIO 486SX/DX I/O SCSI-2 ISA/PCI ZIF, 256K Cache, Exp>128MB SIMM. .$399.00
486DLC/33 486DLC, 33MHz, w487DLC, 0K, 128K Cache, Exp>32MB, AMI, SIMM, 6 Slot..$249.00
486DX/40 486DX, 40MHz, 256K Cache, 0K, Exp>32MB, AMD, OPTI, AMI, SIMM, 6 Slot...$389.00
486DX2/66 486DX, 66MHz 0K, 256K Cache, Exp>64MB UMC, SIMM, 8 Slot $439.00
486DX4/100 486DX4, 100MHz, 0K, 256K Cache Exp>128MB SIMM ISA/VESA....$979.00
SAL/EC/P60 Pentium, 60MHz, 0K 256K Cache, Exp>128MB VESA SIMM .$899.00
SUPER/90 Pentium, 90MHz, 0K, 512K Cache, Exp>128MB PCI, SIMM $1399.00

MONITORS/PANELS MITSUBISHI~NEC~GOLDSTAR~SAMSUNG

NEC Monitors 3FGe, 4FGe, 5FG/P/e, 6EG ... .. $CALL
GS1460 14" SVGA .28 1024x768 I $299
GS1465 14" SVGA .28 1024x768 70Hz NI. ...$349
CM2015 15" SVGA .28 1024x768 70Hz EPA NI..$439
GS1520 15" SVGA .28 ES 1024x768 70Hz NI.....$549
MAG DX17F 17" 1280x1024 .26 76Hz FS NI MPRII...$899
DIAMOND PRO 15FS .28 1280x1024 NI 76Hz........$609
DIAMOND SCAN 17FS .28 1280x1024 NI 76Hz.....$1299
DIAMOND PRO 21FS .28 1600x1280 NI 76Hz.......$2599

PRINTERS ~ SCANNERS ~ FAX

HP FAXJet 900 PLAIN PAPER DeskJet FAX $949
HP PRINTERS **DESKJETS/LASERS all Models** $CALL
HP ScanJet IIcx 16.7M Colors, 1600dpi, PS SE..$1299
LEXMARK 10R Laser 2MB PS 10ppm 600dpi....$1749
CANON BJ10 SX INK JET w Sheet Feeder $299
NEC 1097 10ppm, 7MB, 600dpi, Adobe PS2, PC/Mac..$1899
DEC 1152 Laser Printer 4ppm, 2MB, PostScript $899
PANASONIC 1150, 2023, 2123, 2124 ETC. .....$CALL
Golden IMAGE 800 dpi, 256 Gray Scale, OCR. $179

SOFTWARE SALE

MS FOXPRO 2.6 Win $119
MS DOS 6.2U... ... $59
COREL FLOW 2.0.. , ...$99
COREL GALLERY CD ..$59
IBM OS/2 2.1 Win .$129
MS EXCEL 5.0 Win $169
WinProbe V3.0 .. $29
MS OFFICE 4.2.....$349
Q & A 4.0 Win ...$99
MS WORD 6.0 Win...$149
WINDOWS 3.11 .. $79
SET UP ADVISOR Win..$24
PC Tools Pro 9.0.......$109
Norton Utilities 8.0.....$59
Harvard Graphics Win2U.$110
WorkGroup 3.11 Win..$69
WordPerfect Win 6.0a..$159

128 Atlantic Avenue
Toronto, Ontario M6K 1X9
Phone: (416) 337-2411
Fax: (416) 537-1484

VISA

SYSTEM BUILDERS LIMITED

(4 Streets E. of King / Dufferin - Open Saturdays)

Order Desk 1-800-567-2611

MasterCard

128 Atlantic Avenue
Toronto, Ontario M6K 1X9
Phone: (416) 537-3511
Fax: (414) 337-1484

(E&OE) Prices (Cdn$) and Specifications Subject to Change without Notice. Some Quantities are Limited* Effective November 11 1994 (PRICES ARE CASH DISCOUNTED)

ANUBIS COMPUTING
LEXAS

LEXAS Series Systems

LEXAS 486 $1535.00
486 DX11 66 with 3 VL 128 Cache

ENERGY SAVER GREEN SYSTEM $1599.00
486 DXII 66 with 3 VL 256 Cache
DX4-100 Upgradable

4 MB RAM • 14" NI 0.28 SVGA Monitor • 420 MB Hard Drive • 1 MB VL Video Card • VL IDE Multi I/O • 1.44 MB Floppy Drive • Mini-Tower • Cooling Fan • Keyboard & Mouse

UPGRADE OPTIONS

1.2 MB Floppy Drive	+$60
Middle Tower	+$35
Full Tower	+$60
256 Cache Mother Board	+$20
DOS 6.2	+$55
Windows 3.11	+$65

LEXAS 586 $2550.00
586 Pentium 66 with 3 VL M/B 256 Cache • 4 MB RAM • 14" NI 0.28 SVGA Monitor • 420 MB Hard Drive • 1 MB VL Video Card • VL IDE Multi I/O • 1.44 MB Floppy Drive • Mini-Tower • Cooling Fan • Keyboard & Mouse

天龍電腦公司
每周七日　國台粵英語專人服務
神龍全中文手寫辨識軟件
微軟公司中文視窗
雙橋中文視窗（TWIN BRIDGE）
中文之星中文視窗
倚天及國喬中文系統
倉頡大易輸入法教學
會員制中英文軟體諮詢
翻譯軟體及日本語文作業系統
各種中文輸入法書籍軟體總匯
倉頡輸入法　注音輸入法
廣東拼音　羅馬拼音
大易輸入法　行列輸入法
五筆輸入法　[illegible]輸入法
各種中文字體及字形
華康字體　[illegible]字庫
倚天[illegible]龍字集　[illegible]字庫
繁體字簡體字形　中國龍字形

Government & Corporate Purchase Orders Welcome
Business Hours (ET) - Monday to Friday 10 am - 9 pm Saturday & Sunday 11am - 5pm
Tel 905 470-0365 • 1-800-290-3008 • Fax 905 470-9201
7725 Birchmount Rd. Unit #12 Markham, Ont., L3R 9X3

Canadians on Computers

Continued from page 106

Secretarial Service

No one needs a word processor if he has an efficient secretary

Robertson Davies, man-of-letters, address, Ontario Science Centre, Toronto, 26 Nov 1989, quoted by Tracey Tyler in *The Toronto Star*. The next day Davies happily added: "I am a technomoron."

Tit for Tat

Cooperate on move one; thereafter, do whatever the other player did the previous move

These innocent-seeming imperatives are the two commands that govern the operation of the computer program known as TIT FOR TAT. It was devised and designed by Anatol Rapoport, psychologist and philosopher at the University of Toronto, who is specially concerned with the nature of international cooperation and the systemic causes of warfare. His TIT FOR TAT program outperformed all other such programs in the scenario known as the Prisoners' Dilemma at an international computer tournament held at Indiana University in 1979, and it continues to excel. It initiates reciprocal cooperation through characteristic features: niceness (it never defects first), provocability (it is tough and responds in kind), forgiveness (it rewards good behavior by cooperating the next time), clarity (its strategy is straightforward and apparent to all). The moral to be derived from TIT FOR TAT seems to be (in the words of mathematician Douglas R. Hofstadter) that "mutual cooperation can emerge in a world of egoists without central control, by starting with a cluster of individuals who rely on reciprocity."

Values

The phrase "the computer does not impose" misleads, because it abstracts the computer from the destiny that was required for its making. Common sense may tell us that the computer is an instrument, but it is an instrument from within the destiny which does "impose" itself upon us and therefore the computer does impose.

George Grant, philosopher, "Thinking about Technology," *Technology and Justice* (1986)

Virtual Reality

The whole question of virtual reality will be meaningless in that scenario. We'll be inside the computer, and we won't even realize it.

William Gibson, science-fiction novelist, referring to the way the future will work computers into the social fabric, quoted by Ric Dolphin in *Maclean's*, 14 Dec. 1992

Virtual Reality Machines

I predict, quite fearlessly, that there will be at least one VR machine in every home in Canada within a generation. They will become as ubiquitous as TV sets today.

Bob Hunter, columnist, referring to computers that create the Virtual Reality experience, "City," *Eye*, 21 Jan. 1993

John Robert Colombo, known as the Master Gatherer, is the author, compiler or translator of over 80 books including Colombo's Canadian Quotations (1974), Colombo's New Canadian Quotations (1987) and The Dictionary of Canadian Quotations (1991). Recent publications include Colombo's All-Time Great Canadian Quotations (Stoddart) and The Mystery of the Shaking Tent (Hounslow / Dundurn).

486SLC-40 ..... $1029
- 4MB RAM
- 250 MB Hard Disk Drive
- VGA Card w/256K
- VGA Colour Monitor

486 PCI Local Bus
486DX-33 .... $1,459
486DX-66 .... $1,599
- Intel CPU
- 256K Cache
- 4 Mb RAM
- 420 Mb Hard Disk Drive
- VL Bus IDE I/O Card
- PCI Bus SVGA Card w/1MB
- Non-interlaced SVGA Monitor

486 VESA Local Bus
486SX-25 .... $1,259
486SX-33 .... $1,289
486DX 33 .... $1,329
486DX2-66 .... $1,469
486DX2-66 AMD $1,429
486DX4-100 .... $1,899
- Intel CPU
- 256K Cache
- 4 Mb RAM
- 340 Mb Hard Disk Drive
- VL Bus SVGA Card w/1MB
- VL Bus IDE I/O Card
- Non-interlaced SVGA Monitor

VL Bus Pentium 60MHz
$2,379
- 512K Cache
- 8Mb RAM
- 420Mb Hard Disk Drive
- VL Bus IDE I/O Card
- VL Bus SVGA Card w/2MB
- 15" NI 1280x1024 Monitor

PCI/VESA Local Bus
Pentium 90 MHz $2,799
- 512K Cache
- 8 Mb RAM
- 420 Mb Hard Disk Drive
- VL Bus IDE I/O Card
- PCI Bus SVGA Card w/2MB
- 15" NI 1280 x 1024 Monitor

All Systems Include: 1.2MB and 1.44MB Floppy Drives, 2 Serial, 1 Parallel, 1 Game Ports, 101 Enhanced Keyboard, Mouse, MS-DOS 6.22, Choice of Mini-tower or Desktop Case

IDE Hard Drives	
1 GB	650
340MB	245
420MB	270
540MB	320

Fax/Modem	
14.4K/14.4K Internal	95
14.4K/14.4K External	135
14.4K/28.8K Internal	268
14.4K/28.8K External	339

CD-ROM Drives	
Toshiba 3501Quad Speed	489
NEC OMNI 3X w/CD's	469
Panasonic 562 2X Speed	175

Sound Cards	
Sound Blaster 16 Value Ed.	139
S.B. 16 Multi-CD	145
S.B. 16 SCSI-2/w ASP	279

Multimedia Kits	
SB Discovery CD 16	339
SB Digital School House	399
Platinum CD 16 (4X)	599

Tape Back-up	
Colorado Jumbo 350	259
Colorado Jumbo 250	219
Colorado Trakker 250	399

Note: Prices subject to varying Market Conditions. All prices are cash discounted.

KEHTRON COMPUTER INC.
461 Alden Road, Unit 22
Markham, Ontario L3R 3L4
Tel: (905) 513-8355 Fax: (905) 513-1073

Cherry Hill, NJ
King of Prussia, PA
Wilmington, DE
Norwalk, CT

Season's Greeting

GRAND COMPUTER S&S INC.
420 Consumers Rd., Willowdale, Ont. M2J 1P8
Tel: 416-756-9986
Fax: 416-756-9652 M-F 10:00-6:00

We present latest technologie for a lot less money!

GC-486DXII66 $1350.00
- 3 Slots Vesa L. Bus Motherboard
- 128K Ultra-Fast Write-Back Cache
- 4 MB RAM Memory Exp. to 64 MB
- 3.5" 1.44 Toshiba Floppy Drive
- 1 MB Vesa L.Bus 16.7 M.C. V-Card
- 14" SVGA .28Dpi NI Monitor
- VESA L.B. I/O Controller Card
- 2 Serial, 1 Parallel & Game Ports
- High Q Keyboard
- Hi-Resolution 400 dpi Mouse
- Mini Tower or Desktop Case
- 426 MB Fast H. Disk Drive 12ms

GC-PENTIUM SYSTEM
- PCI Intel Technologie Motherboard
- 512K Fast Write-Back Cache
- 8 MB 72 PIN Fast Ram Memory
- 3.5", 1.44 Toshiba Floppy Drive
- 730 MB 11 ms. IDE Drive w/256kc.
- 1MB ATI PCI Video Card
- 15" SVGA .28 Non Inter Monitor Low Radiation Flat S. 1280x1024R
- Vesa L.B. 32-Bit I/O Controller Card,
- 2 Serial 1 Parallel & Game Ports
- Medium Tower Case w/250 W P.S
- Maxi 101 Enhanced Keyboard
- Microsoft 400 Dpi Serial Mouse
- MS-Dos 6.2 Manual & Disks
- MS-Windows 3.1 Manuals & Disks

PENTIUM 60	$2699.00
PENTIUM 66	$2899.00
PENTIUM 90	$3499.00

CALL FOR ANY PRICE MATCH
Panasonic or Mitsumi CD Rom & S. Blaster Comp. 16 Bit, CDS, MIC, SP $265.00
Prices are subject to change without notice! We accept certified cheque or cash only!
2 Years Parts & 5 Year Labour Warranty

HARDWARE/SOFTWARE

Math Adventure Delivers Cool Lessons

BY ROD LAMIRAND

Title	Treasure Galaxy
From	The Learning Company

Treasure Galaxy is a decent program that avoids one of the main problems with cartridge-style games. It teaches more than just speedy reflexes. Treasure Galaxy, by The Learning Company is advertised as "The Math Adventure that Develops an Understanding of Measurement Basic Fractions Geometric Shapes and More." This game runs on IBM compatible machines with a 386/25 or better processor DOS 5 or later OS a mouse, 5 MB of hard disk space and 2 MB of RAM It will use your Sound Blaster or compatible sound card if you have one

The premise is as follows The Master of Mischief (who looks a lot like the Wizard of Oz) has traveled into space to cause trouble He comes to the floating kingdom of Crystal City where Queen Astral lives The floating city is populated by happy little sundrops which depend on Queen Astral's special crystals to keep up their sunny spirits These special crystals receive their energy from the sun

But the terrible Master of Mischief has built a bad machine that turns asteroids into disastoroids and has sent them to Crystal City to cause great mischief The disastoroids have destroyed the city's measuring devices date keeper and the queen's crystals Now Queen Astral asks you Super Seeker to find the golden crystals and she offers her assistant Twinkle (you guessed it a star) to help guide you

The game itself comprises activities such as adding and subtracting different numbers of objects accumulating credits and codes to trade for crystals and passage to other orbits calculating heights and weights counting in weeks months and days and fitting shapes into different spaces The precise rules and procedures that must be followed are far too extensive to summarize easily although I could easily write reams on this stuff because I have spent over nine hours playing this game to find out if it really is as educational as it claims.

The game's for five to nine year olds and claims that it adjusts the levels of difficulty depending on the child's performance The game does adjust to the level of the player The program is a good one and it tries very hard to do something that is difficult Treasure Galaxy is trying to get children to buy into the fairy story while at the same time working to solve the tasks The program has been well planned and is educationally sound (This isn't surprising if you look at the other software that The Learning Company writes — they have over 20 titles of children's educational software available)

As much as I believe that this is a good product it does suffer from some problems Firstly it is difficult to run Because it needs 515 K of conventional RAM I was forced to boot to F8 every time I wanted to run it and then slowly proceed through my config.sys and autoexec.bat loading some things high and ignoring others

Secondly, the sound files are used over and over again ... endlessly! I suspect this is partly to keep down the size of the program which takes up over 4 MB on the hard-drive However it would take dozens of hours to play the game to its end, and a little more variety from the sound files would be appreciated.

Thirdly, the information on the outside of the box says it is for five to nine year olds while the booklet inside indicates that the program is for six to eight year olds This probably wouldn't be very important except that I have been wondering about the age of children that would find this program beneficial It also makes one wonder about the validity of the numbers and what research went into them

If you have a five/six to eight/nine year old that isn't learning anything by running a small blue hedgehog across your TV screen and if you can repress your TSRs without too much trouble then you should consider Treasure Galaxy It really is a decent educational tool

Contact The Learning Company 1-800-852 2255

UPGRADES
Free Installation
4Mb 72 PIN.. .....189 00
Dead/Bad memory modules REPAIR from.... 15.00
486 DX/66 INTEL....$1380.00
System including 4Mb Ram 340 Mb H.D. 128 K Cache 1.44 Floppy Dr Local Bus 1Mb Super VGA 1024x768 0.28 non interlaced 14" mon tor Tower Case 2 serial 1parallel & game port serial mouse
Pentium 90 INTEL....$2800.00
System including 8Mb Ram 540 Mb H.D. 256 K Cache 1.44 Floppy Dr PCI 1Mb Super VGA,1024x768 0.28 non-interlaced 14 monitor Tower Case Fast 2 serial 1parallel & game port serial mouse
CANNON Printers: BJ100.. 305 00
BJ200E 335 00
BJC4000 [illegible]
Upgrades of 286,386 486 & Pentium Systems.. Pls Call
FAST turn around & prompt service, with state of art equipment [illegible]
CPU Systems
142 Willowdale Avenue, North York, M2N 4Y4
Tel: 416-733-2100 Fax:416-733-2275
Prices quoted are C.O.D. and subject [illegible]
VISA cards subject to surcharge

Pentium®
486DX2® Computers
brother® Laser Printers
USRobotics® Data Communications
Panasonic® CD-ROMs
WESTERN DIGITAL® HARD DISK DRIVES
Orchestra® SVGA Monitors
CREATIVE® CREATIVE LABS INC

PLASMA
APPLICATIONS
SPECIAL OF THE MONTH
486DX2-66 128K CACHE LOCAL BUS
4 MEG RAM 70 ns
420 MEG HARD DRIVE 13 MS
1 44 FLOPPY DRIVE
SVGA COLOUR MONITOR 28 NI
1 MEG VIDEO CARD LOCAL BUS
LOCAL BUS CONTROLLER 2S/IP/IO
MINI TOWER CASE AND KEYBOARD
MOUSE AND MOUSE PAD
Price: $1349.00
4226 ST JEAN BLVD S 209
D.D.O. PQ H9G 1X5
TEL: 514-624 5800
FAX: 514-624-5801
FOR INQUIRIES AND OTHER CONFIGURATIONS CALL
1-800-267-5802

NEW
DX2-66 INTEL MULTIMEDIA PRO
ASHTEQ
486/DX2-66 PROCESSOR
256K CACHE MEMORY
8 MB FAST RAM 70 NS
1.44 FLOPPY DISK DRIVE
1 MB 32 BIT VLB V CARD
32 BIT VLB IDE C/CARD
DOUBLE SPEED CD-ROM
SOUND BLASTER 16 BIT CARD
101 ENHANCED KEYBOARD
SVGA .28 NI 1024x768 MONITOR
PAIR OF AMPLIFIED SPEAKERS
MICROPHONE & EARPHONE
420 MB HARD DRIVE
ENCYCLOPEDIA
AND 14 OTHER CD TITLES
$1945

486/DX-40 $1295 45.99
486/DX2-66 $1375 48.67
420 MB HARD DRIVE
1 MB VLB VIDEO CARD
4 MB RAM 70 NS
MINI TOWER CASE
SVGA .28 NI MONITOR
101 ENHANCED KEYBOARD
2/S 1/P 1 GAME PORT
2 YEARS WARRANTY

486/SLC-33
486/SLC-33 PROCESSOR 4 MB RAM 170 MB HARD DRIVE SVGA .39 MONITR 1 44 FLOPPY DISK 101 ENHANCED KEYBOARD 2/S 1/P 1/GAME PORT MOUSE AND PAD
999

Pentium 60-MHz $2095 72.85
Pentium 66-MHz $2195 73.71
Pentium 90-MHz $2649 88.95
Intel Inside
420 MB HARD DRIVE
1 MB VLB VIDEO CARD
8 MB RAM 70 NS
MID TOWER CASE
SVGA .28 NI MONITOR
101 ENHANCED KEYBOARD
2/S 1/P 1 GAME PORT
2 YEARS WARRANTY

FAX/MODEM
HARD DRIVES
MOTHERBOARD

SYSTEM UPGRADE
MINI TOWER TO MID TOWER
DX2-66 TO DX2-80 MHz
MONITOR 14" TO 15"
RAM 8 MB TO 16 MB
AMPLIFIED SPEAKERS
MS DOS 6.2 DISK BOOKS
MS WINDOWS 3.1

MULTIMEDIA BUNDLE
DUAL SPEED CD ROM AUDIO PRO 16M SOUND CARD, SPEAKERS, EARPHONE, MICROPHONE AND CD TITLES INCLUDING ENCYCLOPEDIA
ONLY 329

ASHTEQ BUSINESS SYSTEMS
335 ADMIRAL BLVD #22 MISSISSAUGA
TEL.:905-795-8333
FAX:905-795-8147
PRICES ARE CASH DISCOUNTED AND SUBJECT TO CHANGE, ASHTEQ RESERVES THE RIGHT TO CORRECT ALL TYPOGRAPHICAL ERRORS

LINO OUTPUT

- CorelDraw specialists
- No surcharge for long processing time even if your file takes a few days to process
- Competitive prices ($7.00 paper, $10.00 film)
- We can print any Mac or PC files.

Call (418) 588-8799
565 College St Suite 304

PROLINE COMBINATION & PAYOFF CALCULATOR

Did you know that there are 210 possible combinations for betting 6 games out of 10 games? See them all and print your results.

- Professional Betting System
- Key Game System
- Wheeling and Combinations System
- and much much more!

If you play Proline and have access to an IBM compatible, you must have this Software.
Special offer $12.50 includes postage and taxes.

Cheque or Money Order to.
Carnell Consulting
4-2200 Glenwood School Drive
Burlington, Ont L7R 4H1
Dealer Inquiries Welcome

UNBEATABLE LOW PRICE! $9.99 + Tax
HOT CD ROM TITLES, Low as

Hundreds of titles available in Business, Children, Family, Education, Sports, Games, Entertainment and many other titles.

TO ORDER:
Ask for a "PIL CD Titles List" by sending (fax or mail) to:

PIL (CD Titles List)
P.O. Box 32600
9665 Bayview Avenue
Richmond Hill,
Ontario L4C 0A2
Fax: (416) 297 5295

PIL Your Reliable & Trusted Store

and write: Yes, I'd like to receive a copy of the "PIL CD Titles List". My name is ______, Address ______ fax and phone number ______.

That is all you need to do for UNBEATABLE CD SAVINGS

PARTS FOR SALE

Dell 386 Sysboard w/64KB [illegible]
386 System Board w/1MB RAM
Intel 386/33 System Board
Made by Intel in USA, [illegible] Expansion Slots
[illegible] Serial/2 Parallel/Mouse Ports Built-in
486 ISA Sys Board/No CPU
Adaptec 1542 [illegible] Adaptor
DTC EISA [illegible] Cache Adaptor
WD [illegible] Card
Intel [illegible] Exp. to 2MB
French Enhanced 101 Keyboard
5.25 1.2MB diskette [illegible]
Archive [illegible] Tape Drive
2400 Internal Modem
Hayes 9600B Internal Modem

Limited Quantity Low Low Prices all the time!

Upgrade Your PC to a Multi-Media System (CD-ROM, Sound Card) from $139
*Some conditions may apply, please call for details.

Pay Level
UPGRADE your PC with More Memory & Big Hard Disk

UPGRADE your PC to an Intel 486 Brand PC from $[illegible]

Starlight Computer Services
[illegible] Road, Unit 76, Scarborough, Ont. M1V 5[illegible]
Tel. (416) 291-7800 Fax (416) 291-5[illegible]

Coming up in the January edition of

THE COMPUTER PAPER

Entry Level Systems & Working at Home

For adverting call 588-1580

Beyond Windows '95

Continued from page **17**

Users will see the roots of these developments with the Internet access software that is included with Windows 95 although it should be far more sophisticated by the time a Windows 95 successor product arrives. The successor product will be able to interface with the infrastructure of the much-anticipated "information superhighway."

In the future, Windows will also be very big on references helping you keep track of "any object anywhere at any time" and keeping track of objects as they move. If, for example, you have a spreadsheet model which relies for its conclusions on data held in another spreadsheet elsewhere on the network the system will ensure that the "referenced data" on the network-stored spreadsheet is not accidentally deleted by anyone and that if the physical location of the spreadsheet changes, that this change is automatically "mapped" to the original sheet which contains a reference to it.

There will also be a great many automation and assistance features within the operating system with integrated programmability and agent support available as part of the operating environment and help systems that seek to answer questions such as "What is this object?" "What do I do next?" and "How do I do this?"

But What Kind Of A World Will It Be Working With?

For an answer to how this will affect the day-to-day working lives of Windows users it is worth reviewing comments made by Microsoft chairman and co-founder Bill Gates during a recent presentation about the kind of world all this technology will create and the complementary technologies with which any Windows 95 successor will be working.

"The key to the real promise here is new network technology " he explains suggesting that PC and entertainment technologies will start to converge in the next few years "It [the new network technology] is fast enough to be two way It'll be used in business and replaces the LAN It'll be used for watching video shows and it'll get out into the consumer market You will have a variety of devices connected up In the living room you'll probably have something that looks like a TV In the den to do your home banking to compose messages, perhaps to do homework, print something out, you'll still have the device with a keyboard which although it'll be smaller and somewhat different than today's PC It'll be more obviously a descendent of what we have right now In fact In the next couple of years all of the video and modern capabilities that the (information) highway requires will be standard features of the PC and so they'll just be ready to plug in as soon as that high speed wire comes into your network."

Successors to Windows 95 have an important role to play in this vision of the future "We are investing a huge amount in building the software that would help run this system " says Gates "We're one of many companies doing that Our approach is very similar to what we've done in other areas. It's an open system where we'll work with any developer to put applications up We'll make sure there are great tools and that's partly why we bought SoftImage which is a video digital production software company whose software was used to create the dinosaurs in Jurassic Park You have to have intelligence on both ends of the network, sometimes that's called client server and you have to have a great user interface We're not trying to take the Windows user interface and put it onto your TV set. In fact we're trying to improve it even on the PCs There's a lot of innovation that you'll expect there We are spending, now over $100 million a year in this area It's a big bet for us."

He says the push for this could come from corporate users "I do see this rolling out in business applications even more rapidly than in the home Getting the wiring there is easier providing the justification makes sense " he says "Video conferencing where the PC allows you to share data and see images I think we'll see an explosion of that over the next few years Telecommuting where people can actually do a lot of work without going in every day Electronic markets where we take the very mechanism of capitalism and we match buyers and sellers more efficiently for a much broader range of products than ever before It will be mediated by these systems On the consumer side there's a huge list of things that'll go on and these applications will have to have a lot of breadth and a lot of depth That's where there'll be a separation between the different platforms and we'll see who's really got the best approach "

And Gates promises Microsoft will remain committed to this idea. "All of this does fit into the vision that we articulated, now, almost four years ago and that's what we call information at your fingertips," he concluded "Whether it's a movie whether it's music whether it's medical data whether it's information about your competitor all of those things ought to be very easy to reach out to and we want to build some of the software standards that help make that a reality We see, even as a very large software company today we see incredible opportunity for growth if we can deliver on these challenges " ❑

Compass Pentium 90 $3,120
INTEL CPU & MAINBOARD
Cache RAM 256K
Memory 8MB exp 128MB
HD 525MB FD1.44MB
Built in IDE/FDD Controller
ATI PCI SVGA 2MB
Mini Tower 3 Button Mouse
101 Enhanced Keyboard
Mag 15" .28 SVGA NI LR Green Monitor
2 Yr Parts & Labor Warranty

Compass Pentium 60 $2,670
INTEL CPU & MAINBOARD
Cache RAM 256K
Memory 8MB exp 128MB
HD 525MB FD1.44MB
Built in IDE/FDD Controller
ATI PCI SVGA 2MB
Mini Tower 3 Button Mouse
101 Enhanced Keyboard
Mag 15" .28 SVGA NI LR Green Monitor
2 Yr Parts & Labor Warranty

Compass 486DX2-66 $1,430
INTEL CPU
Cache RAM 128K
Memory 4MB
FD1.44MB HD 420MB
ATI VLB SVGA 1MB exp 2MB
VLB IDE/FDD Controller
2S/1P/1G Ports, Mini Tower
3 Button Mouse
101 Enhanced Keyboard
Daytek 14" .28 SVGA NI 1024X768 Monitor
2 Yr Parts & Labor Warranty

Packard Bell
Canon Information Systems
EVEREX
DAYTEK
HEWLETT PACKARD
Call for other systems !!!
All Prices are CASH DISCOUNTED and subject to change without notice

COMPASS Operated by **EQS Power Int'l Ltd**

MARKHAM
1 Crown Steel Drive, Suite 106
Tel (905)415-8855 Fax (905)415-8854

NORTH YORK
6101 Yonge Street
Tel (416)512-9650 Fax (416)512-9815

what'snew

APPLE GETS INTO THE NOTEL BUSINESS • Apple Canada Inc and Canadian Pacific Hotels & Resorts have joined forces in a marketing initiative to attract the business traveller Until December 31 1994 guests at CP Hotels and Resorts will be able to experience the Apple Macintosh PowerBook 520c and Newton MessagePad 110 at interactive displays in the hotel lobby Guests will also be able to enter their names into the computers for a chance to win one of three Apple PowerBooks 23 Newton MessagePads 10 deluxe CP Hotels & Resorts Golf or Ski vacations, or 1 600 CP Hotels and Resorts gift certificates Apple PowerBook computers will also be available for personal use to Entree Gold clients of the hotel

Contact: CP Hotels & Resorts at 1-800-411-1414

ENCARTA CINEMANIA 955 ARRIVE • Microsoft Canada Inc has announced the release of the Microsoft Encarta 95 multimedia encyclopedia Approximately 38 percent of Encarta s 26,000 articles were revised for Encarta 95 New features include "no-click" fly out menus and the Pinpointer tool, which creates lists based on word searches, media elements, geographic location subject and time Encarta 95 features 300 new articles 485 new photos and graphics, 100 new audio clips and over 100 minutes of video and animation. Multimedia aspects of Encarta 95 include a video clip of Joe Carter's World Series clinching home run a video clip of South Africa s first bi racial election and an audio clip of the rock band Soundgarden s hit Nothing to Say"

Currently Microsoft Encarta 95 is only available on the Windows platform, a Macintosh version is due out in early 1995 The suggested retail price is $139 with a $60 rebate offered to registered users of Encarta 94

Concurrent with the release of Encarta 95 is the release of Cinemania 95 New to Cinemania is the "Cinemania Suggests feature" which makes video rental recommendations based on a person s mood Cinemania 95 contains more than 130 music tracks, 40 dialogue excerpts 1 000 movie stills and 21 video clips Cinemania '95 is available on the Windows platform for $79 95 Registered users of Cinemania 94 can receive a $10 rebate by returning the coupon included with Cinemania 95 A Macintosh version is expected in December

Contact Microsoft Canada Inc 905 568-0434

CLARISWORKS 3.0 ARRIVES • Already the dominate integrated software package for the Macintosh, Claris Canada is hoping that ClarisWorks 3 0 will take a significant bite out of the PC market

According to the company ClarisWorks 3 0 offers improvements to a number of features especially in the Windows version Its new capabilities include formatting "Assistants" which offer advice on layout design and content of commonly used items New 'Assistants can easily be added as Claris and third parties develop them.

Text organization is improved with the addition of seven popular outline styles including Harvard legal numeric and bulleted formats Slide show capabilities with AVI support has also been added

ClarisWorks is now easier to use, with new shortcuts that offer users push-button access to more than 150 frequently used commands, such as spell checking, cell formatting and auto-summing. Files are cross-platform compatible across the Macintosh and the PC versions of ClarisWorks 3 0

Claris also claims speed improvements in ClarisWorks 3 0 In a comparative study (done by Claris) with MS Works ClarisWorks 3 0 took only 1 36 seconds to save 10 pages of text while MS Works took 3 04 seconds

New word processing features include automatic text wrap word count sort custom text styles and individually variable column widths Among the additions to the Charting and Spreadsheet functions are spreadsheet cell wrap chart format customization and combination chart options New Database features include automatic serial numbering automatic field entry from a customizable pop-up menu and over 50 predefined Avery label formats which make it a snap to generate labels Graphics enhancements include 18 paint tool and transformation effects 32 gradient fills and a 75 piece clip art library

Claris Works 3 0 comes in Macintosh Power Macintosh and Windows versions The price for the Macintosh/Power Macintosh version is $179 until December 31 1994 and $349 from thereafter The Windows version is $149 Owners of earlier versions can get an upgrade for $59 RC

Contact Claris Canada 416-841-9611

URBAN PEASANT ON CD-ROM • One of the long-standing pitches computer salespeople

➤

COMPUTER SYSTEMS PRICE LOW MONTHLY PAYMENT

486 DX/33 MHz (VESA) - $1455 48.86
486 DX/2/66 MHz (VESA) - $1525 51.27

- 540 MB Hard Drive Quantum
- 1 44 FD
- Builtin math co-processor
- Super VGA 0 28 DPI non Interlaced Monitor
- 1 MB video card (32 bit VESA)
- 101 enhanced keyboard
- 32-bit VESA IDE Controller 2S 1P 1 Game Port
- Mini-tower or desktop case with digital display
- Microsoft compatible mouse & pad
- MS-DOS 6 2 w/disk and manuals
- 4MB RAM 70ns

Pentium 586-60MHz - $2675 92.33
Pentium 586-66MHz - $2835 97.70

- Quantum 540 MB 12ms Hard Drive
- 8 MB RAM (70ns)
- Acer 15" SVGA 0.28 NI Monitor
- PCI Motherboard 1 44 FD PCI Controller
- ATI 2 MB Graphic Xpression PCI Video Card
- 2S 1P 1G ports
- Enhanced Keyboard
- 3 PCI Local Bus & 5 ISA slots
- Tower Case Microsoft Jay-shape Mouse & Pad
- DOS 6.2 W/Disk & Manuals

FOR UPGRADES PLEASE CALL * 20% down on VISA or MC * Monthly payments based on 36 months payment plan * No credit checks

HARD DRIVES
540 MB Quantum
$299
Call for other Hard Drives

FAX MODEMS
14 4 Fax Modem $94
14 4 Fax Modem $148
goes to 19.2 K

PRINTERS
2023 Panasonic $215
KXT 2123 298
KXP 4400-1 ppm/300dpi 645
KXP 5400 4 ppm 300 dpi 1,005
2 MB & Postscript

SYSTELLLIGENCE SYSTEMS INC.
TEL: 905-272-1927 FAX 905-272-1661

SW **SamWare Systems**
885 Progress Avenue, Unit 103A, Scarborough, Ontario M1H 3G3
Tel. (416) 289-0833 Fax (416) 289-1507
[illegible] ● Diagnostic ● Repair ● Networking ● Upgrades

COMPUTER CASES
MINI TOWER w/220W PS $85
DESKTOP w/200W PS $75
MID TOWER w/220W PS $[illegible]
FULL TOWER w/250W PS $150
POWER SUPPLY 220W $45

CONTROLLER I/O CARDS
IDE CONTROLLER $15
IDE CONTROLLER w/ IO $25
VESA IDE CONTROLLER w/ IO $30
I/O w/ 2S, 1P, 1G $17
[illegible]
PRINTER CARD $15

486 DX-33 Multi-media Systems
[illegible]
Unit price: $ 1,679.00

VLB 486 DX2-66 Multi-media Systems
[illegible]
Unit price $ 1,899.00

DRIVES
[illegible]

FAX / MODEM
[illegible]

KEYBOARD & MOUSE
[illegible]

LAN
[illegible]

MONITORS
[illegible]
OTHER SIZES CALL

MOTHERBOARDS
[illegible]

PRINTERS
PANASONIC CALL
CANNON CALL
HP CALL

TAPE BACKUP
[illegible]

VIDEO CARDS
MONOCHROME $[illegible]
[illegible]
ATI GRAPHIC WONDER 1 MB $[illegible]

[illegible]

Turn Your Fax Machine Into A Full Page Scanner
from only $69

This Wonder Device Gives You The Power of a Full Page Scanner at a Fraction of The Price of a Handheld Scanner

faxscanner - $69
- Scan full pages of text & graphics
- Use with any G3 Fax machine
- Compatible with all major Desktop Publishing Software
- Portable compact convenient
- 200 x 200 DPI grey scale support
- Windows & Mac Versions ($99)

faxscanner - $249
With Deluxe TypeReader OCR (WIN or MAC)

faxscanner International - $149
Best Buy
Plus OCR for 11 languages (including French)
- Get the faxscanner plus (OCR) Optical Character Recognition software by CAERE
- For Windows

Available From R.R.I (905) 629-3737
Toll Free 800-267-4686 Fax 800-665-1982
Dealers & VARs Wanted

C Compac Computer Systems
2370 Midland Avenue Unit A-15, Scarborough, Ontario M1S 5C6
Tel (416)609-3034 Fax (416)609-3843

486DX2-66
$1295
128k ext cache
1 44mb Floppy Drive
Vesa SVGA w/1mb(exp 2mb)
super IDE I/O(2s 1p 1g)
3 Button Mouse
Mini Tower case
101 enhanced Keyboard

X'mas SALE !!! !!!

486DX-33
$1175

4mb 72pins Ram
350mb Hard Drive
14" SVGA .28 Monitor
INTEL Vesa Green PC
Lease to own available

DEC's Special
IDE Hard Drive Maxtor Conner Fujitsu WD
260mb $195 350mb $235
420mb $275 540mb $315
730mb $465 1.08g $715
Enhanced IDE I/O (with 16550 serial) $50
WOW !
Fax Modem (Internal)
DSI 14/14 Digicom $95 Upgradable 19200 -voice messaging
US Robotics Zoltrix
Multimedia & Sound Card
Sound Blaster 16 value $115
CD Rom Pan CR562 $149 w/ [illegible] purchase
Sound Blaster Discovery 16 $325
Hewlett Packard Authorize Dealer
CANON Authorize Dealer
The above prices are for cash deals only & subject to change without notice

give to homemakers interested in buying a computer has always been that they can store their recipes on it. While it's questionable how many people have bought a computer solely for this reason anyone can now have the Urban Peasant on their PC

The Urban Peasant for Windows is the Lifestyle Software Group's multimedia cookbook based on the popular Canadian public television series Host James Barber has collected over 300 different recipes for this program, which includes detailed color photographs of suggested servings and an audio guide of cooking terms. The program allows you to create and print menu plans, produce shopping lists of ingredients and automatically adjust recipe ingredients for up to 999 servings The package is fully compatible with Lifestyle Software s Micro Kitchen Companion version 2 0 or better, which allows you to add your own recipes or draw upon the thousands Lifestyle Software can provide K.S-R.

Contact: Beamscope 1-800-268-5535

NEC S SMART MONITORS • NEC Technologies Inc has introduced the MultiSync X series of color monitors, the industry's first Plug and Play monitors Plug and Play establishes communication between the monitor and the operating system, optimizing screen performance and enabling monitor installation without drivers or diskettes The XE series of monitors, which are targeted at the consumer market, feature On-Screen Manager (OSM) and MonitorManager Software

OSM allows the user to fine tune the monitor with up to thirteen different image adjustments to create a custom visual environment The MonitorManager software works on both PC and Macintosh systems and enables the user to control monitor functions such as energy consumption resolution image and color The XE series also supports ACCESS bus technology

Pricing for the XE series is as follows XE 15 inch $800 XE 17 inch $1 500 and the XE 21-inch $3 000

NEC has also introduced three new CD-ROM readers aimed at the consumer market The MultiSpin 2Vi is an internal double-speed CD-ROM reader which comes with a 16-bit interface card cable MCS-CDMaster Lite audio player software and Microsoft Encarta Multimedia Encyclopaedia

The MultiSpin 2V Deluxe offers the same features as the 2Vi along with a 16-bit Creative Labs sound card, multimedia speakers and two additional software titles MYST and Sim City Both the 2Vi and 2V Deluxe models include a "Simple Start" installation kit which features an instructional video a poster sized installation guide a user manual and a Windows-based program for automatic or custom installation NEC's new offering on the Macintosh side is the MultiSpin 2V Mac, an external double-speed CD-ROM reader which includes CD-player software cables and Microsoft Encarta. Estimated pricing is $261 for the MultiSpin 2Vi, $426 for the MultiSpin 2V Deluxe and $357 for the MultiSpin 2V Mac -RC

Contact: NEC Technologies Canada, 905-795-3500

SUN SUPPORTS SCHOOLNET • Sun Microsystems of Canada has announced plans to further support SchoolNet, the educational information highway project proposed by Industry Canada

SchoolNet a federal provincial initiative will link public libraries, elementary and secondary schools across Canada So far, more than 4,500 schools and boards of education are connected to SchoolNet allowing students access to the educational resources of the internet Sun donated a SPARCstation 10 earlier this year providing part of the backbone for the project and is now offering its new Netra servers to Canadian schools in the SchoolNet program at the lowest prices offered to Canadian customers.

The new Netra servers, introduced this September include the software and administrative tools pre installed and configured for the Internet. They provide easy access to the internet for PC and Macintosh systems.

Industry Canada will contact eligible institutions about Sun's offer -K.S-R.

Contact: Sun Microsystems 905-477-6745

QUICREN 4 FOR WINDOWS, CANADIAN EDITION • Intuit Inc of Menlo Park, CA (recently merged withMicrosoft Corp. in a deal worth US$1.5 billion) has announced a Canadian Edition of Quicken, Version 4. According to the company, the new revision contains more than 100 new features to improve ease of use, insight and financial planning improved links to WinTax and several other features designed specifically to provide greater financial organization and ease of use for Canadian users

At the same time the company also announced a full line of new Quicken products for all major personal computing platforms In addition to upgrades to Quicken for DOS Windows and Macintosh Intuit announced two new Deluxe versions of Quicken for Windows available on both floppy disk and CD ROM

➤

COM BUSINESS SERVICE CENTRE
1785 Queen St East, Brampton, Ontario L6T 4S3
Tel (905) 768-2600 Fax (905) 799-2601

VESA 128K CACHE
4Mb RAM
1.44 FLOPPY DRIVE
260Mb H-DRIVE
101 ENHANCED KEYBOARD
SVGA CARD
HD/FD CONTROLLER
MINI TOWER CASE
SVGA MONITOR

DX40 $ 1199
DX2-66 AMD $ 1249
DX2-66 INT $ 1299

UPGRADE

PENTIUM SYSTEMS

256K CACHE
4Mb RAM
420Mb H-DRIVE
1.44 FLOPPY DRIVE
ATI SVGA CARD W/1 Mb
MINI TOWER CASE
101 ENHANCED KEYBOARD
FREE MOUSE

UPGRADES

HARD DRIVES
CALL FOR LATEST PRICES

COMPUTER LIQUIDATION CENTRE
OPEN 10:00 AM - 7:00 PM MONDAY - FRIDAY 10:00 AM - 5:00 PM SATURDAY

$2,000,000 NOTEBOOK, LAPTOP & DESKTOP FINAL BLOWOUT LIQUIDATION

LIMITED QUANTITIES AVAILABLE. PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

(905) 602-8077
(416) 609-2655

On Board Systems Inc.
3838 Midland Ave., #106, Scarborough, Ontario, Canada. M1V 5K5
Tel: (416) 321-3111 Fax: (416) 321-3104

ON BOARD

NETWORKING SOLUTIONS
* Novell * - * Lantastic * - * Windows Workgroups *

- FREE ON-SITE ESTIMATION
- CERTIFIED NETWORK-SUPPORT STAFFS
- NETWORK SERVICE CONTRACT
- CUSTOMIZED NETWORK SOLUTIONS
- END-USER NETWORK TRAINING

* ADVANCE SERVER SYSTEM AVAILABLE *
FOR MAXIMUM DATA PROTECTION

HP Laserjet 4 P
Laser Printer
2 MB RAM
4 pages per minute

HEWLETT PACKARD
Authorized Retailer

EPA POLLUTION PREVENTER

Novell Netware 3.12 5-user Package

1 FILE SERVER
Intel 486/DX2/66
8 MB RAM
1.44 MB FD
540 MB Hard Disk
Min Tower Case W/230W PS
Monochrome Monitor

+

4 WORKSTATIONS
386/DX/40
4 MB RAM
1.44 MB FD
Mini Tower Case W/230W PS
14" 28 NI SVGA Color Monitor

= $ 6,499.

Novell Certified NetWare Engineer

AST
IBM VP
Hewlett Packard
NEC
AUTHORIZED DEALER

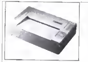
Three Powerful Solutions
To Satisfy Your Scanning Needs

"Single button"
Color fax/Color copy
OCR/Scan solution
10 pages ADF

24 bit one pass
16 7 million Color
page scanner

256 Grayscale
built-in 50 pages Auto
Document Feeder

Available from the following authorized dealers in Metro Toronto
Honson (416)967-9333 Fasidata (416)321-8464 Techwell (905)475-7570
Amnet (905)415-7272 123 Computer (905)451-6769 Kolmex (905)669-6692
For dealers in your area, please call
PLUSTEK Canada Inc. Tel:(905)890-9300 Fax:(905)890-9802
All names mentioned are trademark of their respective holders



PLUSTEK COLOR PAGE SCANNER

Full page, single pass, straight-paper path, sheetfed, optical 600dpi, maximum 1200dpi, 16.7 million colors and 256 grayscale levels. HP Scanjet IIcx emulation driver and TWAIN driver for maximum software compatiblity. 16 bit interface card, cables & s/w included.

Color SP-6000 with Hiscan DOS based imaging software	$579
Optional Softwares (With SP-6000 purchase only)	
Photomagic (PC Magazine editor choice image editing) LE	$29*
WordScan OCR for Windows (PC magazine editor choice)	$59*
Recognita OCR (Scan English, French, Spanish, Portuguese)	$79*
Xformer Raster to Vector $199* Remark office OMR	$199*
Business Card Reader S/W $199* PaperClip DIM	$CALL

十年中文電腦專業經驗
代理多種中文電腦產品
包括排版，廣告，切割等，
零售批發，歡迎比較！

飛羚中文碟系統試用版，功能齊備，雷射輸出	$10
精品手寫辨識系統，認字最準，最快，最多	$449
飛羚中文碟系統共八套軟體，簡繁體 OA版	$99
二郎神中文排版系統，幕前排版，雷射輸出	$199
微軟中文視窗簡或繁體版本 3.1	$299
方玲藏珠中文字庫，BIG5或中文視窗，6種字	$99
方玲藏珠中文字庫，BIG5或中文視窗15種字	$329
天蠍星一號文書處理，適合所有BIG5系統	$49
天蠍星二號PLUS文書排版，600點雷射輸出	$299

產品繁多，不能盡錄，歡迎查詢！

中文電腦訓練班 教授中文電腦操作、中文手寫系統、中文排版系統、中文切割系統 . . .

承接各類中英文切割、界字，設計，專業服務！

百事達中文電腦專線（九零五）八九零八零八八

PLUSTEK 50 PAGES ADF-Gray SCANNER

Full page, sheet fed, optical 600dpi, Maximum 1200dpi, 256 grayscale levels. Built-in 50 pages ADF (Automatic Document Feeder) for OCR, DIM (Document Imaging Mangement), OMR (Optical Mark Reading) processing. HP Scanjet IIp emulation driver and TWAIN driver for maximum software compatiblity. 16bit ISA interface card, cables & DOS based imaging software included.

ADF-600G with WordScan OCR & Paperclip DIM	$869
Remark Office OMR$199 Xformer Raster to Vector	$199

PLUSTEK ScanFX

Fax in COLOR (or B/W), Scan, Copy, and OCR (Recognize text) = Four machines in one desktop unit Perfect for any office (or home office) Connect ScanFX directly to your printer for color or B/W copying (support most Laser, Inkjet and Bubblejet upto 720 dpi) Fax with any fax/modems Scan with upto 1200dpi resolution Built-in 10 pages ADF for multiple document faxing/scanning/copying. All software and hardware supplied Includes Picture Publisher LE 4 0, WordScan OCR , Twain driver, fax S/R software, 16 bit ISA interface card, scanner cable

ScanFX with WordScan OCR & Picture Publsher LE	$999

SAVE $40 By Pre-Registering for the

Toronto LAP&PALMTOP '94

Portable Computing & Communications Expo & Conferences

Dec. 5th & 6th - Harbour Castle Hotel

WIN A PORTABLE!

At the keynote, on both days, we have exciting speakers and a chance to win a computer -
IF YOU ARE IN THE AUDIENCE!

FIRST 50 REGISTRANTS WIN!

Be one of the first 50 to register for the conferences and you'll receive valuable portable premiums:
CALL (800) 444-EXPO for details

Other Sponsors: Hewlett Packard - IBM - NEC - Toshiba - Symantec

Laptops & Multimedia

The world of computers, film, T.V. & radio are combining into one - things will never be the same again! Learn and take part while the market's still new and you can win through knowledge and use!

Notebooks, Sub-Notebooks, PCMCIA & Peripherals

The power of portable computing and communications is dramatically changing. In its wake, our jobs and our lives will never be the same - come and see why!

Pen & Field Automation

Pen computing has vastly improved. Today, many of the manufacturers include it in their standard units. Find out about special applications that will fit your needs

Palmtops , Handhelds, PDAs, Beepers & Infra Red Comm.

Field automation with worldwide networks are available NOW! Step aside Dick Tracy, we've got more power than you ever had!

Wired & Wireless Comm.

Find out what CDPD is and how it competes with other data carriers. Is wireless-data available on a nationwide/worldwide basis, and/or, are we still stuck to landlines? Is it financially competitive?

Tetherless Voice & Data Comm.

Cellular data comm. is here and modems can alternate between cellular & landline! Which products and services are best for your application and why? Are they compatible & worldwide?

Packaged & Customized S/W - Integrated To Suit Your Needs

You need the best system to justify the cost and a working system can pay for itself in under a year. See the market leading vendors & products to find out how and learn which products do the job best!

Security From the Field To Your Home-Office Computers

The issues are VERY BIG and your company is at stake. Automation could provide your company the competitive edge it needs in these financially unstable times - DON'T MISS THIS SHOW!

You'll see all this and more at the Toronto '94 LAP&PALMTOP
Portable Computing & Communications Exposition & Conferences

FREE Exhibition Entry Form - FAXBACK TO (800) 569-LAPS

Show Managers:

Laptop Expositions

104 East 40th St. #802 NYC NY 10016
Tel (800) 444 EXPO Fax (800) 569-LAPS
167 Queen St. South Streetsville ON L5M 1L2
Tel (905) 542-0454 Fax (905) 821-4790

● ● ● ● ● ● ● ● ●

With 50 speakers & hospitality functions, there is a fee to attend the conferences,
Check below if you'd like conference information

☐

Please print clearly - photocopy form for any additional registrants you wish to bring to the show

Name/Title: ______________________

Company: ______________________

Address: ______________________

City/State/Prov/Zip/Postal Code: ______________________

Phone: ____________ Fax: ____________

The revised version will sell for $59.95, while the Deluxe Version 4 sells for $79.99 - DT

Contact: Intuit, 415-329-3567

ARTISOFT ANNOUNCES LANTASTIC FOR OS/2 • LANtastic for OS/2 network is designed to allow LANtastic network users to integrate PCs running OS/2 into their existing DOS and Windows networks.

Users of the LANtastic for OS/2 network will be able to connect to LANtastic network versions 5.0 and 6.0, the CorStream dedicated server and the Simply LANtastic network. In addition users can connect to servers on such networks as IBM's LAN Server and Microsoft's Windows for Workgroups, Windows NT and LAN Manager systems.

The company says LANtastic for OS/2 network users will also have the benefit of coexisting with Novell NetWare 3 and 4 and LAN Server network client software on the same machine allowing users to operate on multiple networks simultaneously.

Artisoft says it took advantage of the native OS/2 Presentation Manager Graphical User Interface (GUI) to provide LANtastic for OS/2 network users with an object-oriented design that shields them from the intricacy of the network operating system. This intuitive desktop design provides users with the familiar look and feel of OS/2 for easy network installation and use.

Security extends from individual to group accounts and Access Control Lists (ACLs) specify account privileges and access rights. Network administrators will also have the ability to assign time-of-day, day-of-week, drive and resource restrictions.

The LANtastic for OS/2 network provides support for network applications that use Named Pipes which provide more efficient Interprocess communication between programs on different computers. With Named Pipes, users can take advantage of distributed client server applications as well as leading database systems that are based on the SQL (Structured Query Language) software standard.

Users will also have the benefit of OS/2 printer queues that provide flexible network control and configuration including rushing holding releasing, deleting and viewing the status of print jobs.

LANtastic for OS/2 network is available in one-, five-, 10-, 25-, 50- and 100-user software kits starting to price from US$139 for a one user kit and ranging to $5,009 for 100 users. DT

Contact: Artisoft, Inc. 800-233-5564

MATHEMATICA FOR OS/2 • Wolfram Research, Inc has started shipping the native OS/2 version of Mathematica 2.2. While the current version of Mathematica for Microsoft Windows runs under OS/2 in emulation mode the new optimized OS/2 version takes full advantage of OS/2's 32-bit environment and runs significantly faster says the company. Mathematica for OS/2 is fully-compatible with the latest release of OS/2 Warp Version 3 that IBM recently announced.

The OS/2 version of Mathematica includes a Presentation Manager interface that features cut-and-paste editing and command history capabilities. It will soon include support for MathLink Mathematica's inter-application communication protocol which will allow OS/2 users to link Mathematica to other applications via TCP/IP, including connecting to the Mathematica front end for Microsoft Windows.

Mathematica has been fully optimized for the OS/2 32 bit environment and takes full advantage of the OS/2 preemptive scheduler and threading. This results in an increase in speed, a more efficient handling of memory, and the ability to run more than one process at a time.

The OS/2 32-bit flat memory gives Mathematica users direct access to nearly a gigabyte of memory. Consequently Mathematica users will now be able to perform larger, more complex computations claims the company. Also, Mathematica users will find that this version runs with less memory than it did, for example when running under Microsoft Windows.

Contact: Wolfram Research Inc 1 800-441-6284 email info@wri.com

EXPERT SERVICE FOR HP, OKIDATA, PANASONIC & RAVEN

LASER PRINTER REPAIR

- quality, reliable service
- fast on site service
- preventative maintenance
- laser supplies and cartridges

O.P.M OFFICE PHOTOCOPY MACHINES & BUSINESS SYSTEMS (905)275-3022

CALL FOR A FREE ESTIMATE

WIN LOTTO!

GAIL HOWARD'S
SMART LUCK® LOTTERY SYSTEMS

Won 39 Lotto Jackpots Worth $79.2 Million Dollars!

The **ONLY** Systems with *documented* JACKPOT WINNERS

Gail Howard is the undisputed authority on lottery strategies used in the world today. Her remarkable success in helping [illegible] win big money in Lotto has led to appearances on hundreds of radio and TV shows including *The Today Show* and *Good Morning America*.

"Last November [illegible], I hit the jackpot to the tune of $1.[illegible] million dollars, [illegible] 5-number prizes and [illegible] 6-number prizes from your System [illegible]. What a joy and [illegible] working on my second jackpot because with your system it's very seldom that I don't [illegible] prizes.

— [illegible], Canada Lotto 6/49

After reading Gail Howard's book, I have won [illegible] prizes to date. In my [illegible] week of play I won seven prizes. In the 2nd, 3rd and 4th weeks I won [illegible] prize each draw, in my 5th week of play, I won the first prize system of [illegible] plus eight other prizes.

— Max Harrell, Canada 6/49 Lottario

LOTTO HOW TO WHEEL A FORTUNE

This 397 page book contains the world's most successful lottery systems including ALL the systems used by Gail Howard's biggest Lotto jackpot winners. Easy to use as A-B-C. US $19.50 + US $3.00 S/H

"Gail Howard's program is the [illegible] most comprehensive and [illegible] easy to install [illegible] technical support [illegible] Advantage Plus [illegible]. For the serious lottery enthusiast, it's the one to buy!"
— [illegible] magazine

"Advantage Plus™ is the most user friendly database on the market, and the most professional and complete program ever devised for Lotto [illegible] the ultimate lottery database for the serious lottery player."
— Computer Monthly magazine

"Lottery guru Gail Howard [illegible] can help people beat the odds."
— Family Circle

Wheeling systems like [Gail] Howard's have the most [illegible] among [illegible], since they [illegible] that the wheels [illegible] systematic way of reducing the odds.
— New York Daily News

"Lucinda Carter [illegible] and [illegible] Jaynes [illegible] both won big jackpots by using Miss Howard's systems. Mr. Carter [illegible] $13 and won $806,383 in the D.C. Lotto game; Mrs. Jaynes hit a $13.3 million jackpot in the New York state lottery. On August 2 an [illegible] [illegible] hit the Canadian lottery for $[illegible]. Two days later, 18 co-workers at a Miller Brewing plant in [illegible] City, NY split more than $7.4 million. All used Miss Howard's system."
— Washington Times

Gail Howard's SMART LUCK® Software for your IBM/Comp. Computer

ADVANTAGE PLUS™

Use ADVANTAGE PLUS™ and you'll trash all your other lottery software. It's the most complete, fastest and easiest to use — in a class by itself. Nothing else can begin to compare!

• COMPLETE drawing results for all Canadian Lotto Games from 1982 to present • Over 80 scientific charts and reports to zero in on winners. Detailed 52 page manual shows how to identify winning patterns • Automatic SMART PICKS™ selects best Lotto #s instantly • Test past accuracy of SMART PICKS™ with one key stroke. A $295.00 value. Your introductory price for a limited time only US $79.95 + US $5.00 S/H

COMPUTER WHEEL™

Easy to use scientific systems that reduce the odds. Has 252 Lotto Wheeling Systems, each with a specific win guarantee. Guaranteed flawless. Find one system that fails its win guarantee and you get DOUBLE your money back! (COMPUTER WHEEL™ and ADVANTAGE PLUS™ — a winning combination!)

• These systems cost as little as two dollars to play, or you can wheel up to 80 of the 49 numbers in your game • Shows the minimum and maximum number of multiple prizes that can be won with each system • TIMES IN THE WHEEL handicapping feature tells how many times each number position is in the wheel so you can place your strongest numbers where they appear most often. Optimizing feature makes best possible sums of your chosen numbers. Saves up to 500 wheels for win checking • US $39.50 + US $5.00 S/H

ADVANTAGE PLUS™ AND COMPUTER WHEEL™
Save $20! Buy BOTH for only US $99.95 + US $5 S/H
We ship IBM/Comp. 5.25". Add US $1.00 for EACH 3.5" disk (one per program)

A PROVEN WINNER!

1-800-945-4245

SMART LUCK® Software
Dept. P 7 P.O. Box 1519 • White Plains, NY 10602
For information call 914 761-2333

DON'T SETTLE FOR LESS

Name ______
Address ______
City ______ Province ______
Phone ( ) ______ Zip ______
☐ Visa ☐ MC Exp. Date ______
Card # ______

No Canadian dollar checks please. Our U.S. banks slaughter us with the exchange and fees. U.S. dollar MO's welcomed.

Compound Documents Through OLE

BY GEOF WHEELWRIGHT

Of all the weird and wonderful features in Microsoft's Windows 3.1, none is as important to the way you use your applications software as a technology known as Object Linking and Embedding (OLE).

An "object" in Windows can be many different things including an application, a device (such as a printer) and more commonly, a designated chunk of your data. OLE operates as a technology to allow you to embed "objects" (such as a picture created in Microsoft Paintbrush) in your Windows documents in such a way that they maintain the links between the application they are being pasted into (such as a word processor) and the application which created them.

OLE And DDE

OLE works alongside another object-handling technology in Windows known as Dynamic Data Exchange (DDE). For best results, you should avoid confusing the two. DDE allows you to provide basic 'hot links' between one application and another. Using off-the-shelf packages, you can create a link between data in a spreadsheet and a word processed document.

You just 'copy' the data from the spreadsheet to the word-processor using DDE and then 'paste' it in the word processed document. There will now exist a dynamic link between the two, such that when the data is changed in the spreadsheet, the changes will automatically be made to the copy of that data sitting in the word-processor. The link, however, is severed as soon as you close one of the two applications.

That's where OLE comes in. OLE allows you to embed data in a document as an 'object' and that object is then linked to the application which created it. So even if you pasted Excel data into a Word for Windows document without DDE, you could still have that data linked through OLE to Excel. When you 'clicked' on the copied table of spreadsheet data you had placed in the word processor, it would automatically load Excel and allow you to edit that data. These OLE and DDE links can be established between any Windows applications written to support them.

The Document is King

Because you are able to embed objects of any kind within a document, the application that produces the document is irrelevant. Rather than relying on a word processor, spreadsheet or desktop publishing package to produce a document, you can instead produce "compound documents" that consist of a collection of different objects. These objects are, of course, linked to the application that created them and therefore, by merely double-clicking on them, users automatically invoke that application to work with and edit the data contained within the object.

OLE thus lends itself to allowing Windows users to take a "building block" approach to the way that they work. It means, for example, that you are no longer tied to the idea of buying integrated software if you used an application that can provide live links to text, spreadsheet and database information within a single document.

The first version of OLE, however, was far from perfect in carrying out this job. In some cases, for example, OLE 1.0 was not intelligent enough to sort out what it should and should not try to print when you wanted a hard copy of the data contained in a compound document. Quite often you ended up with a page that contained some text and a number of icons representing the OLE objects that contained the link data. And that was only one of the many limitations OLE 1.0 had.

Here Comes OLE 2.0

That's why a new version of OLE, known as OLE 2.0, appeared on the horizon during the past year. Just as with OLE 1.0, the idea behind OLE 2.0 is that all types of information can be treated as "objects" that can be copied, moved or manipulated within any Windows application program.

Object types include text, graphics, ani-

➤

PROGRAMMER TRAINING

With offices in London, Toronto, and New York, ObjectArts is an International provider for Microsoft training, software and technical support.

Our satisfaction guarantee takes the risk out of choosing ObjectArts training. Add modern downtown offices, catered refreshments, and Microsoft Certified Professional trainers and our programmer training is unsurpassed. Over 200 companies and thousands of students agree.

Call us today about training or our many other services, and find out why we are one of Microsoft's top training centres in Canada.

- Microsoft Visual Basic
- Microsoft Access®
- Microsoft® Visual C++™
- Microsoft FoxPro
- Microsoft Win32
- Microsoft® Excel
- Microsoft Word
- Microsoft® SQL Server
- Microsoft LAN Manager
- Microsoft® Mail
- Microsoft Windows™ 3.1
- Microsoft® Windows NT™
- Microsoft® Windows™ for Workgroups 3.11

TECHNOLOGIES
- Microsoft Foundation Class Library
- Microsoft® OLE

COMING SOON
- Microsoft® Windows™ '95

OBJECTARTS
London Toronto New York

1 First Canadian Place, Suite 5710
Toronto, Ontario M5X 1E3
363-2026 Fax.363-2027

Microsoft
SOLUTION PROVIDER
Authorized Technical
Educational Centre

1-800-567-4330

Microsoft is a registered trademark of Microsoft Corp.

AISYS TECHNOLOGIES INC.

Professional Database Training
(hands-on, practical courses)

Client Server Systems

Visual Basic 3.0 Professional
3 days $595

Visual Basic as a Client
2 days $495

SQL Programming
4 days $595

Relational Databases
2 days $395

PC Databases

FoxPro for Windows
introductory to advanced

Access 2.0
introductory to advanced

For Information Call (416) 381-4063
(evening courses also available)

1370 Don Mills Road, Suite 300,
Don Mills, Ont.
Tel (416) 381-4063
Fax. (416) 441-0591

mation sequences, short film clips, voice messages and spreadsheet models. With OLE version 2, switching between applications, such as a word processor or a spreadsheet, is unnecessary. To make a change to an Excel created chart included in a word-processed market report, for example, you merely "point and click" with your mouse to be automatically presented with the charting program options from Excel.

You don't have to see a copy of Excel and your charting data loaded into a separate window. The menus and toolbars at the top of the screen just change from word processing menus to Excel charting menus and toolbars. Otherwise, everything else is exactly the same. The only difference is that now you have the appropriate set of tools to make changes to the chart, as opposed to editing and formatting the text on the page.

And these features are only the tip of the OLE 2.0 iceberg. A quick summary of OLE 2.0 features would have to include:

•In-place activation. As explained above, this feature allows you to directly activate objects within documents without switching to a different window. This includes operations such as editing, displaying, recording and playing multimedia objects.

•Nested object support. Allows you to directly manipulate objects nested within other objects, and establish links to nested objects.

•Drag and drop. Enables you to drag objects from one application window to another, or to drop objects inside other objects.

•Storage-independent links. Allows links between embedded objects that are not stored as files on disk. This will enable embedded objects within the same or different documents to update one another's data whether or not they are recognized by the file system.

•Adaptable links. Enables links between objects to be maintained in certain move or copy operations.

•Programmability. Enables the creation of command sets that operate both within and across applications. For example, you can invoke a command from a word processing program that sorts a range of cells in a spreadsheet created by a different application.

•Extended object layout. Allows objects to overlap page boundaries (or other objects) and allows non rectangular objects (those with irregular shapes) to be embedded within documents.

•Tunneling searches. Enables string searches or spell-checks inside embedded objects.

•Property inheritance. Enables an embedded object to "inherit" certain properties from its container. This allows the embedded object to take on an appearance more consistent with the container's appearance.

•Version management. Allows objects to contain information about the application and version of the application that created them. This feature gives programmers the ability to handle objects created by different applications, or by different versions of the same application.

OLE 2.0 As Used In Excel

The way OLE is used in Microsoft Excel 5.0 offers a good example of what you can do with this technology, particularly if you are using Excel macros to develop custom applications. Microsoft Excel macros have always been fairly powerful, but the biggest step in making custom solutions easy is to provide developers with a consistent, shared application macro language based on the Microsoft Visual Basic syntax.

This reduces dependence on programming "gurus" or Excel specialists and provides a familiar standard which corporate IS departments are more likely to exploit. And OLE automation support means that developers can write Microsoft Excel macros that draw upon other application objects as if they were native to Microsoft Excel. Developers don't need to learn a new type of skill to combine various application objects into a single custom solution; they need only learn the name of an object and how to control its behavior.

OLE 2.0 drag and drop support, meanwhile, means that you can drag and drop a Microsoft Excel worksheet range, chart or other object into a document in another OLE 2.0 "drag and drop-enabled application," such as Microsoft Word 6.0.

OLE Into The Future

So OLE 2.0 is more than just a set of new features.

Microsoft has boasted that "it is the foundation of a new model of computing" and promises that it will be the cornerstone of Windows 95 applications design. This new 32-bit version of OLE 2.0 — as implemented in Windows 95 — will be particularly important for network users, because it means that objects will be available over networks without users needing to know anything about the applications that created them.

The extension of object technology across networks also means that users will have access to almost unlimited information, regardless of its type or how it was created. Furthermore, this access will require almost no knowledge of where the information is located.

OLE 2.0 leads into the future of Windows objects and opens a new world of "component software." It provides new opportunities for "publishing" objects that you can share with others and opens new niche markets for creating your own breed of applications from "off the-shelf" parts. Most developers are already starting to support OLE 2.0 in their applications in order to prepare for the look of Windows 95.

Finding OLE Supported Applications

Earlier this year, Microsoft released a new version of its OLE applications catalog, which lists more than 300 products that take advantage of OLE, including word processing, spreadsheet, graphics, database, multimedia and decision-support applications, as well as a variety of programming tools to make OLE development easy.

The catalog also contains more than 20 OLE Custom Controls add-in products. OLE Custom Controls is an architecture that migrates Microsoft's Visual Basic-based VBX architecture to OLE technology, allowing applications to be built from reusable components.

And in the future, to qualify for the Windows 95-compatible logo, Microsoft is telling developers their products must be OLE enabled, a move it hopes will ensure consistency and compatibility among applications and the operating system.

The Downside

Not everything is wonderful about OLE 2.0, however. To start with, it requires a considerable shift in mindset for Windows users and demands a steep learning curve from users accustomed to using a single application at a time.

Consider the plight, for example, of the novice Windows user who has only ever used Word for Windows as a glorified typewriter. How is this individual going to respond when e-mailed a compound document that contains spreadsheet and charting material? They will be happily scrolling through the document, happen to click on an embedded chart and BOOM! — the menus and toolbars at the top of the screen will change into something unfamiliar.

Such a person is going to be very wary about working with compound documents if they feel they are constantly going to be dumped into applications they know nothing about.

How Can One Master UNIX?

ADVERTISMENT

Spend big bucks and attend UNIX training courses? Sure, but when the course ends, you are left with no access to UNIX systems again. You can buy and read UNIX books, but who learns driving by reading the instructions only?

Presenting the ultimate answer to the question.

The MasterUnix Package.

For anyone who wants to "jump" into UNIX world, this package is put together to give you permanent access to UNIX and sufficient instructions to master it. First, there are only two dominant UNIX styles: System V and BSD. If you can get to know both styles, you'd sure build up an "I've seen them all" confidence toward any other UNIX system. That's why we include in the package both a System V styled UNIX (Linux) and a 4.3 BSD styled UNIX (FreeBSD) for Intel 386/486. Now, just turn your PC into a UNIX workstation and start practicing! Both systems are extremely popular in Internet and offer a complete development environment, including ANSI C and C++ compilers plus hundreds of standard UNIX utilities widely found in SUN, HP and DEC workstations. They all have full TCP/IP networking capacity and come with standard X Window System. Skills developed under them are directly transferable to any other UNIX systems. Experiment! You'll soon master UNIX inside out.

Without good documentation, dealing with a system as complex as UNIX is like walking in the dark. Along with the package, we supply you with complete How to documents. From installation to system configurations, everything you may wonder how to do is covered. Questions like how to configure the boot loader, how to set up printers, how to bring up X windows, how to do networking and how to use C compiler, etc., are all answered. To get you started, we also include a 200 page Getting Started Guide and a 100 page User's Guide. Both guides give detailed tutorials on UNIX commands, UNIX system administration, X windows, trouble shooting and many more. Standard UNIX editors Vi and Emacs are also taught. To help you go further, a list of the best UNIX books is included. Totally, over 800 page documents are collected, classified and indexed. All the info we anticipate you may need is now at your finger tips. To ease your preparation for installation, we have even supplied a non-destructive partition program for you to cut a DOS partition into two without erasing any data.

With an investment of $130 for CD ROM version or $155 for floppy version (only Linux available in 36 3.5" disks), we put you onto the shortest path to master UNIX, in fact we put you into a Porsche on the path. Rejoice! at the ultimate autobahn speed you're advancing toward the UNIX heart land.

Money Back Guarantee and Free Support: In 30 days, if you have any problem with installation or system setup, just bring in your PC, we will fix it for you, or else you get your money back. Free phone support afterward.

Motif 1.2.4 For Linux Available: Motif Window Manager and libraries, on-line manual pages, and demo source codes plus a user's guide. All at $207.

Ready-to Run Linux Hard Drives Available: We pre-fill a complete Linux system into hard drives. Simply plug in the drive and go. No hassle. Boot disks and instructions included. Starting from $280 for 210MB drives.

CALL (905) 795-9292

SUNNI MICROLAB

WE DELIVER HANDS-ON EXPERIENCE!

1500 Britannia Rd. East, Suite #208, Mississauga, Ont. L4W 1C8 Fax (905) 795-9294
Hours Mon.-Fri. 10:00-6:00, Sat 11:00-5:00

learn*ing*

Anyone planning to use OLE 2.0 in a workgroup or corporate setting should take such considerations very seriously. They should also consider what happens if people start distributing OLE-based compound documents without being sure that all the needed applications are resident on the PCs that are expected to be used to read the document. If, for example, you distribute a document with an embedded CorelDraw object and the recipient doesn't have CorelDraw, they are not going to be able to do much with that object.

Likewise, users will have to be smart about how they handle network connections on compound documents. If one of the objects in your compound document is a data file that exists on your local hard disk and another is a file that resides on the network, you had better make sure both get bundled with the compound document when you send it around.

The long and short of it is that OLE 2.0 (and other compound document schemes like OpenDoc) will, over the long term, definitely prove a huge boon to Windows users. It represents a technology that is a natural next step for PC users. But until it becomes a widespread standard, anyone wanting to use it should proceed with caution and think carefully about how they create compound documents and what they expect others to do with them when they are read, received or printed. ❑

Congratulations
to the winner of the
COMPUTER PAPER
Free Subscription Draw at
MacWorld '94
Miles von Hausen
The Waterloo County
Board of Education

COMPUTER ASSEMBLY & TROUBLE SHOOTING $195.00

Netware User
System Administration
Netware Installation
Printer Set up
FULLY HANDS ON $395 Only

MICROBUS
3420 Sheppard Ave. E. Ste. 204 (NE at Warden/Sheppard)
(416) 321-0603

PC Hands-On Training
$49.00 per unit course

MSWORD-WORDPERFECT-EXCEL-LOTUS1-2-3
WINDOWS-LOTUS1-2-3-AMIPRO-APPROACH-W
FREELANCE-CCMAIL-WORDPERFECT-QUATTRO
PARADOX-CORELDRAW-VENTURA-PAGEMAKER
MSWORD-EXCEL-POWERPOINT-ACCESS-PARA
WINDOWS-LOTUS1-2-3-AMIPRO-APPROACH-M
FREELANCE-CCMAIL-WORDPERFECT-QUATTRO
WINDOWS3.1-DOS6.22-NETWARE-PC386/486

CNE / CNA courses
starts at $250.00

The Learning Mart
1317 Danforth Ave., Toronto
(Off Greenwood Subway)
416 406 6442

COMPUTER COURSES
PC & MAC

For everyone from the beginner to the experienced

•MS Word •WordPerfect •Lotus •Excel
•dBase •FoxPro •MS Works •Freehand
•PageMaker •QuarkXPress •Illustrator •CorelDraw
•System 7.XX •Windows •DOS •And More!

PC & MAC Installation & Maintenance
User Friendly Organization →→→→ (905)889•5311

PROGRAMMED FOR SUCCESS
City and Guilds Institute of North America
Internationally recognized home study diploma programme for:
Computer Programmer, Systems Analyst, C, C++, UNIX, DOS
HANDS ON EMPLOYER FOCUSED HOME COMPUTER SUPPLIED
CMS TRAINING
Call 416-414-4473
City and Guilds of London Institute
City and Guilds of North America

INTERNET LEARNING CENTRE

ABSOLUTE BEGINNERS EASY PCs
Why wait any longer? Hands on introduction to computers. Includes how to purchase a PC, DOS, Microsoft Windows, Word Processing and an introduction to PC Communications.

PC COMMUNICATIONS AND THE INTERNET
An introduction to PC Communications including E Mail, Modem configuration, PC Faxing, BBSes, File transfers, Internet FTP, Telnet, World Wide Web and much more!

BULLETIN BOARD SYSTEMS FOR BUSINESS
How to Choose, Install and Run a successful BBS. Publish without paper. E mail. Automate mail order sales. Online customer service. Coordinate remote employees.

ADVANCED WINDOWS INTER ACCESSED
Learn to dial the internet using SLIP/PPP connection graphical software (eg MOSAIC/WWW & 600 page text provided).

Hands On. Small Classes with Skilled Instructors.
Call for Free Information Package

The Internet Learning Centre, Inc.
1315 Lawrence Ave. East, Unit 202, Don Mills M3A 3R3
Tel: 416-444-5373 Fax 444-5784
Email - internet.learning@canrem.com

ADVERTISING

*F*or
*A*dvertising
*I*n the
*L*earning
*S*ection
*C*all Koula
*A*t
588-1580

SoftTrain Institute
Central Campus
615 Yonge Street Suite 500 (at Yonge & Bloor)
975-0522

Long-Term Programs (2-12 months):
- Computerized Office Specialist
- Computerized Bookkeeping Specialist
- WordProcessing Operator
- CAD Specialist
- DeskTop Publishing Specialist
- Computer Literacy
- PC Specialist / Programming
- CNE/CNA Preparation
- Customized Full-Time Programs

Computer Associates

Short Term Courses:
- WordPerfect
- WordPerfect for Win
- Word for Windows
- Lotus 1 2-3
- Lotus 1 2-3 for Win.
- Excel for Windows
- Typing/Keyboarding
- Data Entry
- dBASE III + / IV
- DOS
- Windows
- C / C++
- QBasic
- AutoCAD
- Essentials of Accounting
- ACCPAC Simply Accts (Bedford)
- ACCPAC Plus GL/AR/AP/PR
- CorelDRAW
- PageMaker
- Harvard Graphics
- PowerPoint
- and more!

About SoftTrain:
- Affordable tuition / 100% hands-on
- Low instructor/student ratio
- Placement Assistance
- Certificate upon completion
- Days/Evenings/Weekends
- Steps from Subway line
- New courses introduced periodically

If you are over 45 years of age and have been recently laid off you may qualify for Government assistance

Central Campus Only
Programming
C++ OOPs & Windows
Visual Basic
Unix Shell

Computer Assembly
Introduction to Novell

Register now!

Central Campus only: PC Assembly, PC Architecture, Configuration and Installation, Trouble Shooting, Unix, Novell, OS/2, Job Search Skills... and more!

CLASSIFIEDS

CLASSIFIED ADVERTISING IS FREE FOR PRIVATE INDIVIDUALS For businesses advertising rates are $7 per line (40 characters). Send in your ad along with payment, for the January 1995 issue by November 28 1994. Private individuals to qualify for a free ad the ad must be for one-of-a-kind items of sale. FREE ads qualify for one month in the local edition only. One ad per person only please. All other ads classify as business ads and are subject to the $7 per line charge. The Computer Paper reserves the right not to print submissions.

BBS

1st CLASS Amiga BBS Bloom Beach Free 783-5924

AAP BBS Lots of fun for you and your computer. Join d'fms 1995 and get 2 months free on us! Call now 416-237 9010/237-8337

ARC BBS 8-lines, 18 gigs etc FREE! Need we say more? 905-471 2470 Call today!

ETERNAL Hell BBS Running with a usr hst dual standard 28.8 8 networks and 3 inter-bbs fun games. 700 megs online 9600-28800 24 hrs a day 905-713 1731

interACTION The film and television BBS, Internet classifieds & more 416 621 4476

OSIS BBS 416-256 7005 Investment club success technology business career

QBSR BBS on-line 24 hrs 1.0 gig of files 5 different nets easy to use, speeds up to 28.8 kbps all kinds of hard to find drivers and files CD Rom with 64 files All the latest FREE! Call now at 613-398-6640

THE BOARD OF PREY BBS 2 gigs+ of files messages, online games & chat, running vantagefile of 14.4 bps. D of 588 1290 30 hs FREE and not long 1 s-south

THE MIX BBS 24 hr mt NET/Fishermail & Qwk support GT ntwk, latest shareware releases v32b s/HST 1200 to 16.8 baud 905-841 8197 and 416-804 7392

EMPLOYMENT

ADVANCE YOUR CAREER IN COMPUTER SALES

We are Canada's No 1 Volume electronics retailer and we are seeking goal oriented ambitious dynamic people with a positive attitude to join our Computer Department. Experience is an asset, but not necessary. Please send a resume quoting Ref #AC10/19 To Personnel Manager 6310 Vipond Drive, Mississauga ON, L5T 1G2 or fax 905-564-0757

Only those selected for an interview will be contacted

FUTURE SHOP
DISCOUNT SUPERCENTRES

$58 537 14 PER YEAR using your computer. Free disk shows how. Call 1 800 488 1294

A George Brown (Casa Loma) Graduate in PC Installation & Repair with 5 mths exp as a PC technician & computer sales rep seeking employment. Please call any time at Tel/Fax 416-644 5893

ANALYST/Programmer seeks contract/ft PC tutoring C Clipper dBase hard mgmt exp Ip of 416-496-9035

CAREER OPPORTUNITIES List your resume on the Internet. Only $55 for 1 whole year. Call (905) 564-1022 or MFT ALCN@aol.com

CNA looking for any type of PC related employment full or part time. Call Phil at 514-738-3234

CNA 3 12 PC/support grad looking for entry level position. Call Faud 416 724-5749

CNE 3.1x and eight years of experience in repairing PCs and printers seeks part time contract work. 905-279-1202

DESKTOP PUBLISHING OPPORTUNITY World's most popular restaurant publication now available for licensing in remaining towns/cities in Canada. Not a ready person? by 'Coffee News'. Full disclosure of incredibly successful system plus list of all present licensees. Small towns 1,000-10,000 population, net $50,000/y. Larger cities your ship's come in! Call now! (204) 452 7471

EXPERIENCED WP Graphics, Fully computerized home office. By the hour or project. Call 905-642-3780

GRAPHIC Artist will work for FREE! Mac specialist Quark/Illus/Photoshop. Creative Adv Diploma/Computer graphics Diploma. Call George 905-886-8049 or 436-1815.

HIGH School student seeks employment at any Vaughan computer store. Call Robert after 330 at 905 832 2490

PIA Expert in dBase IV FoxPro Foxbase-pc, RPGIII CL AS/400 10K Government grant. Call Dane 683 1371

PART TIME Work for s/w developers. Send resume to DNA Networks 448 Spadina Rd. #200 Toronto ON M5P 2W4

PC trainer specialized in DOS/Windows office applications seeks full time employment. If interested, pls leave msg at 416-447-8421

PC TRAINERS. Excel, Word, C++, Access, Visual Basic. Private College. Fax 416 322 3819

PROGRAMMER eqt with expertise in Z80 (64180) assembler, in the software development for real time control and MIDI applications. Also programmer rapid in Pc applic programming in C++ & Visual Basic for Windows. Ful or p/t. Fax resume to ACD Inc. 905-475 2735

PROGRAMMER/Analyst seeks work: MS-Dos Windows dBase Clipper or Tutor Jobs Ont grant (up to $10,000) Don 416-251-5198

PROGRAMMER/Analyst seeks work. MS DOS Windows dBase Clipper or Tutor Jobs Ont Grant up to 10k. Don 416 251 5198

PROGRAMMER Exp in C, Fortran, dBase, Mathematica and Unix manmachine board f/pt contract work. Call Simon 416 962 5270

SELL Money Making Computer Diskettes Call 905 828 9759 for details or send $19.99 to Ennoure Import/Export 7253 Hunting Cres Mississauga ON L5N 6R6

SYS OR ANALYST/PROGRAMMER seeks contract in C++ Oracle PowerBuilder Call Eric at (416) 548-5578

SOFTWARE Analyst looking for after hours work. 5 years exp in C and the OS/2 environment. Call after 5 pm at 416 346 6325

WANTED PC Support person. Autocad R12, Netware 3.12, Wins ## and Comm Email @ CIS 72343 162.

WANTED An opportunity to learn Unix Netware Tcp/ip Novell and Client/Server technology at my expense. No salary required just the opportunity to advance my career. Please call Chuck at 905-388 8945

HARDWARE

(20)386 Fossil ... 520 ... 16-bit Ne-Ethernet Coax $40 & up New OS 2 ver 2.1 $50 (10) mono-mon $20 416-925-4850 x1351

1 PASS Post board & manual to aid computer repair. Save $$$, fix that dead computer. Only $20 Call 905-884-3105

127MB IDE hd $85 386/33DX Motherboard $59 Desktop case $40 Jumbo jumperless tape compress on card $200 Call 416-502-0314 after 8 pm wkdys

14 Monochromatic mon TTX new with Hercules card $80 obo Mike 905-277 9600

2 486 DX40 VLB meg hd, 4 meg ram 28 NI svga 1024 x 768 A brand new green systems $1250 Robin 905 277 1578

20MHz 386dx vga color system $608 & 286 system $250 (all) new 1 44 meg fdd un teh! Also xt system $130 eves 905-884-6505

286 LAPTOP 20mb/1mb CGA $450 905-275-4838

286 Tandy 3000 hl, ega, 1 fdd $300 with 20 m hd 1 2 m fdd $375 obo 286 mrth ... $50 1.2/360k fdd $40/$20 Call 905-946-8360

286 1m/40m 1fd ega $380 386sx 1m/120m 1fd vga $500 386dx 4m/120m 1fd svga $650 416-418 3990

286 Laptop + portable printer for sale Both are in perfect condition $750 Call 416-292-9137

286 SYSTEM 40mb hd 1 2 fd, 1 mb ram, Sony Trinitron mon, EGA graphics + extras. $300. 493-4373 or pager 391 9801 lv msg

286/12 2 mb ram 40mb hd 2 floppy drives color vga mon WP5 1 Dos 6 0 Windows and more $690 Jorge 272 2073

286 LAPTOP Computer 2m Ram 40m hd with a pocket modem $650 905-820 0600

286 fd 1mb ram, 1.4 and 360k fdd 35 mb hd mono 101 kybd $260 with 2nd ram $290, bare 286 $190 bare xt $50 24 pin printer $75 bases $200 905 273-5200

286-12 Motherboard 1 mb Dram on board $25, 2400 modem with cable $30 256k Simm (exp) 2mb $10 ea 5 25 (360k) floppy drive $35, 3.5 (720k) floppy drive $25 905-472-3153

286-12 4mb Dram on aboard, 5.25 & 3.5 high density drives 42mb hdd CGA card and mon 2400 mbsend with cable and 9 pin IBM ereprinter with cable $580 905-472 3153

286 12 1mb ram 42mb hd 3.5 & 5.25 floppies, mono monitor 2s 2 p pnrtle $300 obo 8-10 am 416 533-6887

286 16 8mb Ram 40mb hdd stacked to 80 mb 2 fdd math coprocessor vga card, vga color mon, softwr $450 905-607 2402

286AT Col mon 2 floppy hdd 1m $285 449-0768

386/33 Loaded comp 2mb ram 200 mb hd 1.2 & 1.44 fd modem sec 16 bit slot, vga mon 5 bay vga card very expandable w/ printer 196 cm built in font eule 12 yrs old $800 manuals w/ software Allan 447 3408

386 30md 2 meg Magnavox VGA mono monitor warranty $480 Laser printer 300 dpi $360 416 788-0383

386/33DX Motherboard 64k cache $48 hd 120mb hard drives $59 ea Firm Call after 8 pm 416 502-5314

386/33 Co-processor 128k cache 8 mb ram 120mb hd vga Wonder card, mega color mon for serial mouse, power bar printer loaded with software $1300 obo 905-827-5618

386/16 w case supply and 5 megs ram $200 at 2880 sup I/O card 24 pin color printer $250 or all for $500 416-225-9838

386DX-40, 4m ram 245mb hd tower vga monitor 24 pin Panasonic printer + plenty of software + microsoft mouse $1200 neg. Hannes 905-887 1388

386DX33 computer 4 meg ram 120mb hd svga color mon dual floppy drive sound card $800 complete. La msg 416 783-2183

386DX40 Computer svga mon, 4mb ram, 105mb hd 1 mb vid 2400 ext modem, ATI sound mini-L Bob 905-855 3097 $900 firm

386DX40 4m ram 85 mbhd speed floppy 14 NI mon svga 1.44 fdd $1250 Kelly 928 5543

386DX40 8mb ram 420 md hd 1.22 & 1.44 fd Mag svga mon 24/96 fax modem $1100 Mark 724-2825

386DX40 4 mb 1024x768 28 n man svga fmts 130hd 1.44 fd 96/24 int s/r fax/modem 1 yr old 2 yr warranty $900 firm 604-8347

386DX40 4mb ram svga 130 hd fax/modem intel tower mouse 1 yr old $800 416-929-4225

386SX 4mb two floppy drives new keyboard ext modem printer Star nx1000 games $700 obo 905-666-1027

386SX16 48 meg hdd 4 meg ram 144 floppy math coprocessor new mitac svga mon 28 DOS 6.2, Windows $550 416-234-8030

386SX16 40 meg hdd, 4 meg ram 144 floppy math copro new Mitac svga mon 28 Dos 6.2 Windows $550 416-234-8030

386SX16 33mb hdd 2mb ram 1 44 fdd mini tower case with speed display 512k ... vga card new kybd mouse Dos 6.21 games $400 905-457 9653

4 4mb Simm Chips 30 pin 70 ns brand new $190 ea firm 416-502-8314

4 Meg 72 pin Simms 4 pc $190 each 386DX 40 motherboard $100 Tony 416-265 3234

40M IDE hd $80 720 k fd $30 8 bit Ethernet card $50 16 bits Ethernet Card $100 with cable and connector 886-0589

4164 Rams for Ibm XT 150 nsec. 9 chips for $10 Karl 905 781 2100

486/33 8mb ram 120mb hd ATI vlbus accelerator w/bus mouse svga mon internal 9600 fax/modem, joystick printer loaded with software $1700 obo. Call 905-827-5618

486 IBM-66MHz 8m Ram 340 hd 14 28 svga $1650 svga mon $250 416 909-2010

486 SX33Mhz 2 mb Ram & Sale (and) 8n vp 3.5 & 5.25 floppies mono mon $600 416-224-8223.

486 INTEL DX2/66 8m ram 256k 2 x CD Rom 5016 1 2 & 1 44 fdd 80mb hdd Jystck 8md svga & svga mon SJ10EX/S1 mouse kybd setup & m.media software $2000 obo. Shenan 416-441-6664

486-25 vga color system 4 meg hd ink jet (paid $1436 in 1994) only $999 twd 2 meg memory for system Pro 386/33 & 486/23L $130 each 905-884-1305

486 33 Motherboard 2 megs Ram Excellent condition $190 obo. George 905-427-8374

486DX 2 66 MHz Intel based computer 256Kb cache 8 megs ram 500mb hd SB Pro Bigmouth Voicemail card Vesa Cirrus Logic video card Vesa IDE card, kybd & mouse $1800 obo Paul 416-236-8092

486DX 33 Intel cpu for $146 or with motherboard 3vld 128k cache for $260 Memory optional Mark 905-949-4826

486DX2/66 4 m ram 256 hd 14 svga mon mouse Windows software $1450 416 920-7510

486DX33, 16 mb ram, 300 mb hdd, 1.44 floppy $2500 Call Robert at 277 5802

486DX33 with 256k cache 8mb ram, 120mb hd sk, 14 mb floppy Trident vga card, at IO 2S/1P/1G media vision 16 bit sound card Creative Lab 16 bit 2x speed CD Rom $1100. Also HP4L laser printer $790 Wayne 416-898-1638.

486SLC33 4meg ram 170mg/hd 14 svga monitor 1 3.5 floppy lots of programs $1200 Epson 9 pin printer works perfect $60 416-240-0412

486SLC33mh $70 comp 286mys w/ svga 5 mb 29md hd $300 sound vision svga/16 bit audio card $70 40 mb mfm hd w/ cont $40 vga mono $20 ex CD Rom $60 256kb Simms $8 386DX 40 board $36 lots more 905-829-2250

486SX25 VL-B 4 mb Ram 1.2 mb & 1.44 mb fd 130 mb hd svga color mon, 101 kybd mouse dos 6.2 win 3.1 software package Star NX 2430 24 pin printer 10mths old under warranty $1500 obo. After 4 pm 905-831-8160

ACER 386DX25 4md ram 105mb hd both ffds 1 md video card vga mon kybd mt mouse. Dos 6.2 Win 3.11 software load $900, Hp deskjet $290 Both for $950 Jason 324-8661 after 6 pm

ADAPTEC 1522 Kit and Quantum LPS270S fast scsi-2 will install $379. Call Mike at 416-740-4377

AMIGA 1000 w/sidecar ext drive manuals Dos 1 1/2/3+WP4.1 Superbase Photon + others + 4 prog books mags No reasonable offer refused. Fred after 6 301 795 7041

AMIGA 2000 3mb ram, 80mb hd Nec 3d mon joystick, modem + software $850 obo Peter 905-335-1818.

AMIGA 2000 40mhd, 3m ram, 2 fdd 2080 c mon $800 obo 416-745-9021

AMIGA 1000 Supra Modem 1200 GVC Commodore 1084s video monitor Olympian electronic compact NP Printer

Advertise in the classifieds for Free*

Private Individuals: FREE; Businesses $7 per 40 characters

1. Private individuals FREE. Business (regardless of whether they are full-time or part-time business) $7 per 40 characters
2. FREE Classifieds, maximum number of insertions is two per month running for one month only
3. Each letter, number symbol punctuation or space counts as a character
4. Please use spacing and punctuation. No asterisks, bullets or unusual symbols, do not use capital letters. *The Computer Paper* is not responsible for errors in wording if these rules are not followed.
5. Send your ad by mail to the address below or fax it—fine mode please

We do not accept FREE Classifieds by telephone

Which Section? ☐ BBS ☐ Hardware ☐ Software ☐ Wanted ☐ Employment ☐ Services

$7

$14

$21

$28

$35

Business Classifieds accepted by telephone, fax and mail

Method of Payment

☐ Cheque ☐ Money Order

☐ Visa ☐ Mastercard

Payment

Card# ______

Expiry Date ______

Name on Card ______

Signature ______

Ad Charge ______

Multiply x No. of Months ______

Multiply x No. of Editions ______

Subtotal ______

Add GST (7%) ______

GRAND TOTAL ______

Free Classifieds accepted by mail and fax ONLY

Send your classified ad to: THE COMPUTER PAPER CLASSIFIEDS
#408 99 Atlantic Ave., Toronto ONT M6K 3J8 **or fax us** (416) 588 8574

Name ______

Address ______

City, Prov ______ Postal Code ______

Telephone ______

CLASSIFIEDS

Amiga programmers handbook, + more! $1200 obo 416-909-8100

AMIGA 2000 40mhd, 3m ram 2hd 2090 c mon $900 obo 416-745-9921

APPLE CD Rom 300 ext drive w 2 CDs warranty $350 Call 416-488-8064

APPLE Newton Notetaker 110 New $550 Days 905-513-2356, even 905-470-8688

APPLE IIgs complete systems starting at only $225 Call 416-504-0465.

ASUS-386 486DX50 Vesa system w/128k tobac 2 Vesa slots 1.44 flpy 101 kybd, mini tower mag video etc. $700 firm. Mike 416-740-4377 or Motherboard only $349.

ATARI ST Programs (Stereo Cad 3D Cyber Paint, 1st Wordplus 3.2 games and much more) $5-60 IBE 16 bit central card $10 416-691 5788.

ATARI Mega2 Megafile 20 hd SX212 modem, SM 124 mon. Star NX-2400 24 pin printer 7 Neodata programs, kybd mouse all manuals + much more. $950 obo Wayne 422-3108.

ATI Graphics Ultra Pro 2mbVESA and VLB mach32 current drivers, manuals $225 170mb 18ms ide drive $200 Call Dave 905-676-6847

ATIdata 9600 ext 4 sale $85 416-398-9247

BERN DUAL 44 mb scsi software 5 disks, cleaning kit. $2250. 584-5341

BRAND New Logitech color scanner w/ manual and software box unopen! $400 Frankie 905-881 3030

CD ROM Philips (1x) 150kb/sec plus MV 16 bit sound card Together for $425 firm. James 905-459-9868.

COLOUR Printer Star NX-1000R $100, Nintendo + 18 games many classics $150 Plus more, color cell to best offer Jeff 4-9pm 905-731-4108

COMMODORE 64c system for sale includes 1541 color mon, 1541 disk drive, 3-1581 disk drives Commodore MPS 801 printer 1200 baud modem software books, amiga and colour $850 obo 905-799-5308

COMMODORE 128 Complete with RGB color monitor disk drive, printer joystick, mouse + lots of software or will sell separately 905-773 0160

COMPAQ LTE 386/20 Notebook, 6m ram, 40 mb hd 2400 int modem, vga mono case, manuals & Compaq slides 2 batteries Dos Windows Word $1200 or trade for 486 desktop Randy 905-294-3058 Lv msg

COMPAQ 286 w/color 5.25 40 meg, hard drive printer WP Lotus, games. $400. 416-421-5608.

COMPAQ Deskpro 286 2 meg ram enhanced Compaq kybd, 71 meg hd (Dos & WP 5.1) high density floppy 1 empty bay amber mon., Excellent working condition $325 firm Randy 416-428-9172.

COMPLETE 486DX For sale 905 406-8607

COMPUTER For sale. Tandy SL2 640k Ram 20 mb hard drive 3.5 + 5.25 floppy drives monochrome monitor mouse installed includes Tandy DMP134 printer Excellent condition. Good starter for $600 905-876-4582

DISK Drive IBM 4869 0 single slot. As is best offer takes it home. Lv msg @ 255-7908.

EPSON 586G Laptop 100/4 $2100 obo 515-8748

EPSON MX 100 & dot printer wide carriage + ribbon $150. 462-9210

ETHERNET Network adapter card twist/coax/aui combo 16 bit with manuals and software all new 5 cards only $45 each also cables and connectors. Call Rod 905-887 1000

EXTERNAL SCSI CD Rom w/ ext audio ports cables Dos & Mac software from caddy $190 new 44mb Syquest $30 88 mb Syquest $60. 905-830-9758

FAST Notebook, Texas Instruments Intel 486 DX 25 8 mb ram 120 mb hd DOS Win 3.1 portable mouse ball warranty $2700 905-278-8817

FAX/Modem 9600, Brand new Choi 416-510 9981

FAX/Modem 14.4 new-packed with Bitfax and Bitcom 5 yrs warranty Will help install $110 obo Lee 416-661-8229.

FILM Recorder with 35mm film back radio technology $250 obo Call 905-940 7878

FILM Recorder with 35mm back $200 obo Call 905-842 7878

FOR SALE Apple Power Book 180 and hp ink jet printer $1400 Call Frank between 9-6 at 867-5032.

GVC 2400 external modem with everything required Call 416-598-5417

HARD Drive 546 mb, IBM new unformatted 2 yr warranty $400 obo Call Lee 416-661 8230

HARD Drive & monitor 416-766-8750.

HARD Drive 130meg $120. Jan 416-287 0342

HARD DRIVE 200 mb IDE Western Digital Caviar $200 416-963-2584

IBM PS/2 Notebook, 386 with 4mb Ram, 40mb hd, Includes mouse and 2 batteries. $900. John 416-948-5924 or 519-578 0844

IBM PS/1 286 not the other type of ab 286s. Color mon 40 meg hd, 2400 baud modem, 1 meg ram 3.5 fd very good for students Comes with microsoft works 2.0 and more!! $500 905-271-4433

IBM PS2 55SX 60mb hd vga 4 mb ram $475 and 386sx laptop 40 mb hd $450 obo 519-747-4874.

IBM PS/1 486DX33 4 mb Ram 452 mb hd svga monitor PM television card and software, both 4 final sound card CD Rom, $2200 905-507-6818.

IBM 386/20 4 mb ram 80 mb hd 256 video mem IBM 14 vga mon DOS & 2 Win 3.1 fax s/w AT fax/modem 24/96 $700 905-276-8817

IBM Token ring 4m adapter cards (ISA) $175 color 3270 emulation cards $100. 548-8388

IBM 386SX16Mhz, 4mb ram 80mb hd 1.44 fr color vga mon 101 kybd, mouse $600 obo Jason 905-878-4457

IDE40/106/210/245 mb hd. 80 and video card 284-7451

IMAGE Artist handheld scanner $100 obo 538-2412.

INDY Car Racing w joystick & card $90 12 DC 600 tape backup cartridges, 60 mb $10 each John 416-756-2208

IOMEGA Bernoulli and II dual 44mb scsi software 5 disks $2250 obo 584-5341

JUMBO 250 int/tape drive with cable software and tape Never used. $130 905-461-4233

LAPTOP 286/12mhz Toshiba T1200XE 1024k Ram, 40mb hd $500 905-507 9818

MAC LC 475-8mb ram fully sealed 416-881 2842

MAC LCII computer 6mg 40meg hd color mon -- software $1100. 286 20mg hd 4meg ram 1.2 floppy vga mono monitor $369 783 4490

Subscribe

Holiday Special!

Save 20% off the regular subscription price

Receive 12 issues of The Computer Paper for only $19 95 (regularly $24 95) Offer expires December 31, 1994 (Canadian subscriptions only)

Don't miss another issue. Call now to start your subscription today!

(416) 588-1580 • Fax: (416) 588-8574

1-800-465-3517

TORONTO

NAME	
ADDRESS	
CITY, PROV	POSTAL CODE
SIGNATURE	DATE
PAYMENT ($24.95) PAYMENT ENCLOSED (CHEQUE OR MONEY ORDER) VISA MASTERCARD	
CARD #	
NAME ON CARD	EXPIRY DATE

Fill out this form & send it with your payment to:

THE COMPUTER PAPER
Suite 408,
99 Atlantic Ave,
Toronto, ON
M6K 3J8

$24.95 Canada,
$60 U.S.
$90 Overseas

● OTTAWA ● MONTREAL ● ATLANTIC ● ONTARIO ● MANITOBA ● CALGARY ● EDMONTON ● B.C.

MAC LC475 4 meg 160 hd col mon plus-er All equipment is new with 1 yr warranty $1999 negotiable. 416-421 2507

MACINTOSH Plus monitor mouse kybd $95. Also Starwars screen entertainment for IBM compatible $25 Hector at 736-4960

MACINTOSH Classic w/ 4mb kybd & mouse $700 obo Panasonic KX-P1091 $150 obo. HP Calculator $25 obo. 905-520-6541

MAGNAVOX VGA mono monitor $60 486 color monitor $140 783-8808.

MICROSOFT Printing system for HP Laser printers $110 and Call Chew after 7 pm at 905-771 7132.

MODEMS S/R 14.4 $85 Pocket s/r 96/96 $48 mouse $7.60 All new warranty 751 7784

MODEMS s/r 14.4 $80 Pocket s/r 96/96 $49 Mouse $7.00 All new warranty 751 7784

NEC 6FG 21 monitor like new Mac and PC @995 487 5690

NEC Notebook Ultralite versa color 4mb ram 120mb hard disk active matrix fax modem $4800 obo Pager 530 3613.

NETWORD Cards 201 SMC & WD Coax.AUI 16-bit boot prom/pt, from $40-80 386/sx motherboards as is. Call after 6 pm 502 9314

NETWORK Arcnet adapter cards smc, also and and coax cables. 10 cards available $10 each Call Rob 905-887 1000

NEW Turnkey Windows voice mail & fax on-demand 486/66 computer system w monitor $5000 Call 7 leave message 905-771 7140

NEW 386DX Coprocessor $40 386SX mixed 1m ram $70 40m scsi hd $40 Micro ch video brd $60 Fax Mon Tue 3 pm 6 pm 297 1600

NEW VOICE NV4 4 CO lines fax mod $750 & lines caller ID $550 N1 Vantage 4/12 + 6 phones $750 Mumble M900 fax $100 single line phone system w/ fax switch $200, voice/fax switch $35. 336-5017

NOTEBOOK NMCC3866SX 40mb hd $350 firm Steve 905-607-5744 GB Repairs & Upgrade. 905-607-5744

NOTEBOOK EPSON 486SLC2-50 color 4m ram/120m hd trackball int fax/modem carry case like new $2130 416-519-8773

NOTEBOOK 386 25Mhz 4 meg ram 60 meg hd, some trackball touchscreen Dos 6.2 Windows 3.1 PSD Simply Accounting $1100 neg 322-3384.

OKIDATA OL400e laser ad printer 4 mole 1 mth old 300 dpi 512k 4ppm 5 yr warranty 100 page tray with toner Power saver mode, built-in fonts $620 Allan 447 3400

OKIDATA OL400e Laser like page printer 300 cpi 4 p/m hp laser jet I p+ compatible. Brand new still in box. 5 yr warranty $400 no fax Call 905-826-2560

PANASONIC KX P1124 Impact dot matrix printer still in and like new Will throw in 1000 sheets paper $250. Dash after 6 pm 416-425-3396

PAPER Fax tractor feed printers Many types of surplus various Limited supply leave your fax number on machine list $5 & up Deal for lot. 256-7989

PARTS Hotline Add ID, CD Rom, any type $ war dal + install Free advice 905-278-2580.

PC Jr & Epson LX-80 In good working order 8 WP software Best offer takes pkg. Call 416-533-6115.

PENTIUM 8 Mb ram 256k cache 256 hdd 1.44 fd PCI 15 svga mon very new $2150 905-846-5384

PERIPHERAL Sharing device logical connection by 5th Generation Systems Inc mod 4100 Ob42-900 1mb/512k 4 serial 2 parallel ports, w/power pak. Best offer lv msg @ 255-7989

PORTABLE Ruth I lunchbox 286. Takes full size cards Interne 30 meg hd int 3.5 & ex 5.25 high density drives + more Excellent condition $400 firm 416-428-9172

PORTABLE PC Security alarm $80 494-9160

POWERMAC 6100 Series Accelerator Go from 60 to 91 MHz a 60 seconds! The 33% boost permit costs only $80 Dealer ships available Guaranteed Send $90 to WILLIAM R.D. BOX 1554 Station H, Montreal Quebec, H3G 2N5 or call 514-486-1990

PRINTER Ricoh RP-2400 Hrish series high quality 24 pin dot matrix, color upgradable! less than a yr old with setup windows driver and 1 case of paper. Still under warranty $250 o.b.o Call Mike 416-977-4648.

PRINTER Samsung 2412 24 pin dot matrix. Facet print 200 cps. Single continuous feed 8 font styles. qual print mode. Brand new Excellent print. Includes 700 paper 2 yr warranty original box, manual. $150 obo Taranjeet 905-677-6217

PRINTER Epson Stylus 800 ink jet, new must sell for $240 Alex at 416-284-0378

RAM 4x16 m/t 70ns IBM also 16x2 mb 70ns Silicon Graphics $25 per mb. Hurst 416-675-1183.

ROBOTICS Fax/modem 14.4 v42 bis, internal $165 new sealed in box. Jan 416-287 0342.

SCSI HD control $50 Fax color Tue 3pm 6pm. 297 1600

SHARP 32KB Multiling. electronic organizer IQ7900 w/organizer fax, IE card. $225 new Evelyn 665-9412.

SOUNDBLASTER Pro 2 & card for sale. Works fine and comes with manual, disk and cables. $70. Call Alan 416 447-5397

STAR NX1000 color print $120 obo 515-1100

TIMPLEX LINK/2 for sale. 3 nodes: 2-16 slot nest 1 12 slot nest NCL+ 1..2, OSC 6, DVM 6 TimeView 2000 2.1 on Sun Sparc Call Ken Wilson 204-954-5372.

TRIDENT ISA SVGA card 1 meg. $50 firm Can be seen working 1-16 mhz accelerator board for lite Atari ST $125 works in STEs 787 0983

TRIDENT 9000 SVGA card with 512k Also CD-Rom and disk-based games for IBM. Call for color and pricing Richard after 3pm 905-773-1881

USRobotics Sportster 14400 v32 bis data/fax modem, internal with 16550 uart, 2 mths old with disk and manuals. Asking $125 905-940 3188

VOICEMAIL & Faxmail system + Inter-office memo + data/chat line + talking classifieds + local long distance + tele-survey/market research + much more. Includes 386 computer Tony 416-346-8802.

WINDOWS Sound System (incl spkrs & mic $125 Epson LQ-860 24 pin printer $175, 416-283-1586.

XEROX Memorywriter computer $60 286 1 meg 20 hd VGA mono monitor $289 783-9940

XT Turbo-12Mhz, 640kb 21 mb hd 5.25 fl, kb, mon. DOS WP etc $215 1mb 30 pin Simm 70 ns $40 101 kybd (new) $20 5.25 floppy drives (360kb) $15, serial port cards $15. 905-822 9944

XT Turbo 30 mb 640k HGA + CGA Amdek mon $125 905-470 1585

SERVICES

COMMERCIAL
Real-time INDUSTRIAL
Computerized Applications
Design and Programming
25+ years of experience
call COMPUCYBER inc. today at
(416) 733 1130

On Site Services

- Hardware & software trouble-shooting, upgrading, including motherboard, memory, FAX/modem, sound card, HD and drive memory etc.
- Network Installation (Novell & Lantastic).

$30/hr or $60/Proj Call 416-730-7176

PC 911 - Call for help

Hardware & software setup, troubleshooting, upgrading
Special Order/project

$20+ 716-3239

PC Fixers

For all your
Computer Headaches
We Consult, Trouble Shoot, Diagnose, Upgrade, Advise and Fix your Computer problems
Call 416-266-6978

8-Track tape conversions 905-839-3879

C++ WINDOWS Database programming. ED 416-736-5938

CRD CD ROM SERVICE. Make your own CD ROM disk of data, backup etc Pickup and delivery Call 905 387-9630

COMPUSERV CONSULTING install start/setup and troubleshooting of hardware/software Onsight service available (905) 819-0956

COMPUTER/DTP LESSONS Perfect for the university student/private individual An introductory lesson/s to the Mac or DTP etc. Reasonable Harry 889-5311

EARN WITH YOUR PC A simple DOS program will show you how Send $5 to STRATEGINET 30 Henbury Pl Scarborough, ON M1B2B8

PC FIXERS-Repair upgrade & fix 416-9081

PC TECHNICIAN with 5 yrs exp on troubleshooting Novell installation and admin seeks ft pt or temp assignments. Jamie 280-0567

REASONABLE RATE Computer Repair 536-5853.

WORDPROCESSING Services. Best rates, Laser Print, Fax, Del avail. Call 416-865 9412

SOFTWARE

ACCOUNTING SOFTWARE
Sales, Installation, Training
Business Vision, Dac Easy Pro,
Legal Pro, New Views, Outpost
Granatron Accounting Inc.
416-633-2179

1 MILLION Automatic phone directory on CD anywhere Turbo C++ WordPerfect for Dos Drawperfect for Dos. Call 538 2412.

3D Studio Release 2 Pro Animation tool includes all disks, CD-Rom with lots of sample animations and all manuals Original price $3100 I want only $800!! Cannot be used for profit. Call 820-8378.

BIBLE TRIVIA and Bible Story Scramble games. $10, or $1 for demo diskette. M Paslsch, Box 42072 1881 Portage Avenue, Winnipeg, MB R3J 3X7

CA Simply Money for Windows v 1.0 on 3.5 hd Simply the fastest, smartest, easiest software to manage your personal finances Full small business support. New unopened $50 Call 905-949-4805.

CANADA POST Certified postal code lookup software 905-530-5071.

CME Complete study package brand + CD with bonus software $140 905-224 6887

COREL Draw 4.0 and Aldus PageMaker 5.0 for sale Unopened/unregistered $360 each 416-968-4076.

COREL DRAW 4 with Rev C patch-on 3.5/2 CDs. Maintenance release addresses issues relating to printing & color separation includes WP6.0 import filter $230 Call Mark 905-945-4805

COREL DRAW 4 3.5 & CD $225 Rob 821 3337 eves

COREL Draw 5.0 (3 CDs & 3.5) $350 Borland C++ & AFW $80 Math Cad 5.0 $75 Random House Unabridged Dictionary $50 PrintShop Deluxe CD version $40 Call Hunjeez 416-534-1288

CORELDRAW 4.0 on 3.5/2cd with manuals Like new Maintenance release addresses issues relating to printing and color separations includes WP 6.0 import filter Mark at 905-949 4826

DECK II (2.0) Digital Audio software for Mac Asking $250 obo. Dwayne at 822-2918

DIGITAL Video editor Adobe premiere 1.1 Windows w/manuals $135 Call Miles 905-831 8243

FOR SALE 40mb disks $4.50 for 15 (3.5) including labels + box. Call 905-478-5629 or 771 9871

IBM PC DOS v6.1 OS2 v2.1 $35 each obo Vincent 905-886-6022

IBM User games for sale mint cond. If interested call Ed at 905-454-4493

MAC Aldus PageMaker v 5.0 sealed $600 Atlas sketch v 1.5 with manuals $150 416-465-0654

MAPLE V Rel 2 DOS/Win student edition (Brooks-Cole) $90 unopened Calculus T/L 2 Mac unopened Tom 537 1969

MICROSOFT Works v3.0 for Windows Brand new Unopened $100 obo Vincent 905-886-6022

MS Works 3.11 plus MS Dos 6.2 Brand new in shrinkwrap $70 8pm. Lotus Organizer $35 416-461 7871

MS Word 6.0 $250 WP 6.1 $230 (with QP 5 and electronic dict) all brand new factory sealed Call Mike 783-0718.

MSOFFICE Professional v4.3 on CD $420. Corel 3.0 CD w/manual $120 Negotiable.

►

USER GROUPS

AMIGANAUTS MEETING On the second Sunday each month 6 p.m. at 2975 Don Mills Rd. West, Circle Community Resource Centre 2nd floor. Games Arm Exit Amiga room support, monthly tutorials and presentations of latest Software and Hardware for the Amiga and coming soon a BBS.

ANIMATORS GROUP — Interested in the creation of 2-D and 3-D animation? Zimgraphics Inc. offers hands on training and memberships to those interested in computer graphics. For more information call (416) 929-8130.

AS400 DEVELOPERS ASSOCIATION employers, employees, suppliers and contractors share, learn & network on topics including connectivity, development standards "bad Guys" and advancing. Call 322-8445 FAX 322 7129

CANADA ROUNDTABLE ON GENIE — Nightly and weekend meetings. Discuss Canadian Politics, Sports, Canada-U.S. Relations, Travel, Entertainment. Try En Français, which includes a French tutorial. More info? 1-800-638-9636

CANADIAN COMPUTER GRAPHICS ASSOCIATION — CCGA's mandate is to provide education and information in computer graphics technology and its applications. Additional benefits include insurance, newsletter, subscriptions, employment liaison office and annual art & design competition. CCGA 2115 Sheppard Ave. E. Suite 110 Willowdale Ontario M2J 1W6 Fax 491 1670 Tel 491 2886

CANAM COMPUTER CLUB for serious computer hobbyists. Breakfast meetings are held every Saturday morning at WATTS Restaurant at Eglinton Square Mall, Scarborough. The Club has a sister group in the U.S. with whom information and help are exchanged. Membership is free but a full breakfast, a $5.00 minimum, gratefully. For info call Bill Marchant at 757 1275.

CASE — Computer Aided Software Engineering is open to anyone interested in learning tool and technology management. 1 1 1/2 hours monthly scheduled meetings. Vendor presentations as well as individual BBS 497 5263 1 MBS All messages. Each 2nd category called CASE). Contact Joe Da Silva at 252-1453 or Rob Beckman at 928 0694.

CLIPPER DEVELOPERS ASSOCIATION OF TORONTO — For details call Mike Pa[illegible] 905 338-5197 ext. 441

CLUB CUBASE — for users of Steinberg's award winning Cubase MIDI sequencer, meets at 7:30 pm on the last Monday of every month at Italian Institute, 410 Dundas St. E. One block west of Parliament. Call 496-0905

CLUB MAC COMPUTER GROUP OF ONTARIO — All Mac users, Macintosh OS & related software, meets 2nd Tuesday. Michener Institute, 222 St. Patrick St. Toronto. 7 pm to 10 pm. Infoline 462 1702.

COMPUTER TRAINERS NETWORK — meets the first Thursday of every month to discuss issues related to PC's & training. Each meeting includes a presentation on relevant topic. Location: the CBC Building 25 John Street. Call Lynn at 367-9215 for further details

CYBERPUNK RESEARCH LABORATORIES — Merry hackers in search of information mountains. RAM not required. For further data write c/o CyberPunk Research Labs Seneca College of Communication Arts 1124 Finch Ave West North York ON M3J 3J3

INTERNATIONAL PROGRAMMERS GUILD Meets every second week starting at 7:00 pm on Thursday Nights in downtown Toronto at the Olde Bailey, 38 Wellington East, Toronto. Programmers who are not members are also welcome to attend. Ask at the front desk for the Programmers Guild. For more information or a free copy of the latest newsletter call the IPG @ 905-624 7947.

INTERNET USER GROUP Meets 1st Tuesday of every month at Toronto Western Hospital Bathurst & Dundas. Take the elevator to the 6th floor at 7:00pm. Call Diane O'Connell 416 365 1899 or Dan @ Grant York.ca

KW-MUG — 376 Peel Street New Hamburg ON N0B 2G0 (519) 662 2671 Focus: Public domain distribution, reviews of current software, meetings variable, no fees.

LOGIC — functions by: Meetings 1st (Macintosh) & 3rd (Apple II) Tuesday of the month, North Toronto Memorial Community Centre, 200 Eglinton Ave West at 7:00pm. Messages 416-323-0828, BBS 416-447 9771 FAX 905 731-6159

METRO TORONTO ADAM GROUP (MTAG) Supporting ADAM, CP/M, TDOS Users. e-mail (416) 424 4362 or write to P.O. Box 165 260 Adelaide St. E. Toronto ON M5A 1N0 Meetings 2nd Monday of each month 1485 Albion Rd (Community Centre) and 4th Sat each month at the Pape Ave Community Centre. Monthly newsletter.

Microsoft Access and Visual Basic User Group. Meetings held 1st Thursday of every month, 6:00pm at the Bramalea Building, 1 Queen St East, 22nd floor. For more information contact the Microsoft Information Centre at 800 563 9048 or Fraser Dickson at 416-864-6542 or 905 822-1866.

MISSISSAUGA COMPUTER CLUB — Meets on first Wednesday of every month at 8pm at the Burnhamthorpe community Centre located at 1500 Gulleden Dr. in Mississauga. For online info call our support BBS at (905) 568-5294 or (905) 568 2436

NORTH AMERICAN DESKTOP A nonprofit users group for PC and Apple. Users meet to exchange of ideas, find new sources and information through presentations, discussions and networking at an affordable price, bi-monthly. For more information call (905) 889-5311

Ottawa Amiga User Group (OAUG) Meetings held on the 1st Wednesday of every month at Geological Survey of Canada, 601 Booth St. Alice Wilson Hall (ground floor). For more information contact Gaetan Sodre at 613 830 3175.

PCCT (PERSONAL COMPUTER CLUB OF TORONTO) — IBM and PC clone users, meets 3rd Tuesdays in the Burgundy Room of the North York Memorial Community Hall, 5110 Yonge St North York at 7:30 pm. Membership includes shareware library, BBS, 12 special interest groups & workshops. Voice info line (416) 24[illegible] 5798

Repetitive Strain Injury Support Group meets the 2nd Thursday of every month. Most people who have this condition. We can help you with information, prevention of coping with this work related injury. For more information please call 416 493 3641 or 416-252-6471 x299

TAF TORONTO ATARI FEDERATION ST/STE/Falcon computers. 100 members, BBS, Newsletter, SIGS for MIDI/DTP, General and more. Meets 1 [illegible] Thursday of month in North York Memorial Community Hall in the N.Y. City Centre Square building, 5110 Yonge St. at Park Home. BBS: (300-16.8) 225-0319. Info-Line (416) 22-55-823 CALL TAF

THE CANADIAN AUTODESK MULTIMEDIA USER GROUP — Interested Users of Autodesk Multimedia products are invited to call Ila Z[illegible] at (416) 929-8136

THE CANADIAN INFORMATION PROCESSING SOCIETY For further information call Rich Panton 548 1437

THE COMMUNICATION NETWORK Join our Social Network/Support Group for SHY people and enhance your social and interpersonal skills. Participate in weekly organized social and cultural activities. Weekly meeting from 7-10pm. Pre-registration is required. Call for more info at 651-6886 or 651 7990

THE DURHAM P.C. USERS' CLUB Meetings on second Thursday of each month at 1:30 pm (free admission). Meetings held at CAW Local 222 Hall, 1425 Phillip Murray Ave. Oshawa. Contact Linda Nelson 905-523 2787 or Bruce Laycraft at 905-728-9351

THE ELITE GROUP OF 3-D PROGRAMMERS — (E.G.3D P) in association with L.T.P.D. Dedicated to Atari users. For more information write to L.T.P.D. c/o (E.G.3D P) 31 Montye Ave. Box #2 Toronto Ontario M6S 2G8

THE INTERNATIONAL INTERACTIVE COMMUNICATION SOCIETY (IICS) is a nonprofit professional organization dedicated to the advancement of interactive and multimedia technologies. Through monthly meetings, newsletters and networking IICS members are able to keep up-to-date in this growing field. Membership is $80/y. For more information call Peter Richardson 416-288 1550 or fax 285-4396

THE TORONTO COLOUR COMPUTER GROUP — meets on the 2nd and 4th Mondays of each month. For more information call Larry Osborne at (416) 972-1600

THE TORONTO CUPTA USERS GROUP (TCUG) Meetings held in Feb Apr June Sept Nov each year. Contact Terry Ferns at 416-620-6565 X635 or 416-620-6913 (fax) for more info. Corp membership fee $50/yr (up to 3 employees). Single membership: $25/yr.

TORCHI (Toronto Region on Computer Human Interaction) — Meets every second Wednesday of the month from 1:00 pm-10:00 pm. For more information re speakers, topics and membership. We are the local chapter of SigChi a part of ACM. Call M. Boshes (416) 446 2697

TORONTO APL SIG — An educational and social organization concerned with the use and promotion of APL computer language. 4th Monday of each month at 6:30 pm (starting the Summer) at BCE Place, 181 Bay Street, 10th Floor. Or write to APL SIG Box 384 Adelaide Street P.O. Toronto Ont. M5C 2J5. Contact Ron Rest (416) 962 3130

TORONTO BORLAND USER GROUP — meets 1st (C/C++) 2nd (Paradox) and 3rd (Quattro Pro) Thursdays of every month at 6 pm, 6:30 pm and 1 pm respectively. Meetings are held at Borland, 5001 Yonge St 14th floor. For membership and meeting details please contact Doug Campbell 496-2120. Free BBS (905) 211 3795

TPUC (TORONTO PET USERS GROUP INC.) — Commodore users (PET, 64/128, Amiga, CDTV, MS-DOS, etc.) meets Tuesdays (1st: 128, 2nd: Amiga, 3rd: GEOS, 4th: 64). York Public Library, main branch, 1145 Eglinton Ave. W. (near Oriole h). 7:30 pm 3rd Thursday Alderwood United Church, 44 Delma Drive, Etobicoke 1:30 pm. Software library, newsletter & BBS information (416) 253-9037

TRACE — Toronto Regional AutoCAD Exchange. Presentations on the last Tuesday of every second month. Held at the Malton Community Centre, 3540 Morningstar Drive. For details call Tim Lucas at (416) 750-8755

WORDPERFECT USER SUPPORT GROUP meets the first Thursday of every second month. Call (416) 120 4289 or write to WPSG, P.O. Box 5503 Station A, Toronto M5W 1N4 for more info.

ZIM USERS GROUP — Revival of the Toronto Zim Users Group. Emphasis on exchange of ZIM technical expertise in a friendly environment. Contact Fay Rakoff [illegible] (416) 979-6216 or Fax (416) 979-4888

CALENDAR

NOVEMBER

ONTARIO COMPUTER FAIRS Nov 29 Whitby Soccer City. Contact 1-800-465 2286

CIO SUMMIT Nov 28-29 Toronto Marriott Eaton Centre. Contact Judith Sykes PR at 416 921 1080

TRAINING

SCO STANDARD INTERNATIONAL TRAINING CENTERS offer a variety of UNIX training courses: Introduction to SCO System V Dec 12-14, SCO System V Administration 1 Dec 15-16, UNIX System V Administration II Nov 21-25. To register or for more info call 1-800-667-UNIX

SEMINARS

CISCO INTERNETWORKING SEMINARS Technical and Industry Series. These seminars are designed to provide education on a variety of enterprise networking solutions. Internetworking experts present everything from the basics on internetworking to the latest emerging LAN and WAN technologies. These seminars are free of charge and will be held in major Canadian cities until March 1995. For more information contact Cisco Multimedia Network at 1-800-668-0856

PUTTING DOCUMENTS ONLINE NOV 24 9am-5pm $295 plus GST. This one day workshop will teach you everything you need to know about planning an online project from one of North America's top authorities in the field. 4700 Keele St. York Campus York University. For more information call 416 736-5616

THE INTERNET AS A SALES & MARKETING TOOL. This seminar will focus on how the Internet can assist all businesses. Watres Key Nov 30 9am-4pm Days Inn Hotel 33 Carlton St Toronto $225 For more information contact Lis Arbetsi of Stratton Hall & 5 Commercial one at 416-585-3667 or 416-585 3200

LAP&PALMTOP 94 Dec 5-6 Harbour Castle Westin Convention Centre Toronto. Contact 905 542-0454

INTERNATIONAL

FUTURE FORECTUM Nov 20-21 Phoenix Arizona. Contact 312-938-3600

MACWORLD EXPO Nov 22-24 Stockholm Sweden. Contact IDG World Expo at 508-820-8624

NETWORKS EXPO EUROPE Nov 22-24 Frankfurt Germany. Contact Bruno Blenheim Inc at 201 346 1400

WIRELESS INFORMATION NETWORKS CONFERENCE Nov 29-23 Amsterdam Netherlands. Contact BIS Strategic Decisions 617-982-9500

WINDOWS SOLUTIONS CONFERENCE & EXPO Nov 29-Dec 2 Frankfurt Germany. Contact Seybold Seminars at 310-457 8381

OPEN SYSTEMS WORLD/FED UNIX Nov 28-Dec 2 Contact 301-953-3636

EMAIL WORLD Nov 28-Dec 1 Boston MA, USA. Contact DCI at 508-470-3880

PEN BASED EXPO AND MOBILE WORLD Boston MA USA Nov 29-Dec 1 Contact 508-470-3880

INTERNET AND DOCUMENT DELIVERY WORLD Dec 5-8 New York NY USA Contact Meckler at 203 226-6967

CLIENT SERVER AND DATABASE WORLD Dec 5-9 Chicago IL USA Contact 508 470-3880

IMAGE WORLD/VIDEO EXPO Dec 5-9 San Jose CA USA Contact Diane Grace at 914-328-6157

BALTIMORE COMPUTER CONFERENCE AND EXPO 94 Dec 1-8 Baltimore, MD USA Contact 703-683-8500

WINDOWS SOLUTIONS CONFERENCE AND EXPO Dec 7-9 Tokyo Japan Contact Seybold Seminars at 310-457 8381

MACWORLD EXPO Jan 4-7 1995 San Francisco CA USA Contact IDG World Expo at 508-820-8624

CLIENT/SERVER WEST CONFERENCE & EXPOSITION (3RD ANNUAL) Feb 14-17 1995 San Jose Convention Centre San Jose CA. This event offers business and IT executives the opportunity to explore core technologies in the field of client/server computing. Contact 516 733-6821

HIGH TECH DIRECT 2000 CONFERENCE & EXPOSITION (4TH ANNUAL) Feb. 27-Mar 1 1995 Santa Clara Convention Centre Santa Clara CA. This event is widely recognized as the country's leading showcase of cutting edge marketing and sales executives from high tech companies. Contact 516 733-6827

INTERNET SUMMIT CONFERENCE (1ST ANNUAL) MAR 14-15 1995 SHERATON NEW YORK NY. Devoted entirely to answer the most complex questions facing users of the Internet, this visionary event serves as the leading resource for those looking to get the most out of this new technology. Contact 516-733-6753.

CLASSIFIEDS

Call now at 416 299 4566 and ask for Warner

NOVELL netware full ver 2.12 never used. With complete manuals and software ready to install $250. Call Tim 293-0567

NOVELL NW4.0 10 User version on CD Rom with registration disks no box. $900 339-5017

OS/2 2.11 (full version), MS-DOS 6.22, Windows 3.11, Wolfpack, Dragon's Lair, Carmen World/Time, Arkanoid, Monopoly, Speed Gravis joystick. Dave 416-445 5792

POWERBUILDER Desktop with manuals and teach yourself book $200. Call Roger 963 8344

PRINT Shop Deluxe DOS Version 3.5 & 5.25 disks $25. All manuals 416-663 2564

USED IBM Games Best Offer Large selection including Myst, 7th Guest, NHL Hockey, FIFA Soccer and many more! Call for a complete list. Free local delivery. Call Jeff at 416 778-0780 (h-msg)

WINDOWS 3.1 $100, WordPerfect 6 $165, Doc 6.1 $60 obo. Brand new. Unopened. Call Dennis after 6 pm 416-141-5658

X W NG/Imp. Pro/B Wing/Strag ck $90 Call Heath 416 946 8304

WANTED

386-40MHz Motherboard [illegible] cache. Mike 905-277-3599

ANY Kind of components for IBM XT for donation. J. Kamme [illegible] 113 Westview Ave. Ottawa ON K1Z 6E2

COMMODORE C64/C128 Units for repair parts & all related items needed. Also Transactor magazines. 905-945-1389.

DESPERATELY Seeking Mac new MD 3 or any parts. Please call Michele 465-4733

DIGITAL PDPMA needed. Call Dan 905-830 3093

IDE HD [illegible] for 386/486 motherboard [illegible] wanted. 406-9607

INTERFACE Card for an older original HP Scanjet scanner with whatever additional you may have for it. Phone or Fax 519-131 5404

SONY or Seiko monitor. Call 705-671-9753

TAX Credit for you! Mac Unicorn and switch for donation to school servicing kids with special needs. Contact Play and Learn Julie or Peter 782 1106.

VIDEO Game cartridges for Atari, Adam, TI99/4A and Vic 20 computers. Call David at 519-576-2128

WANTED Donations of all types of computers, printers & software needed by agency/school child/youth programs. Tax receipts provided. Call Marty 398-6603 ❑

No matter how you say it, the meaning remains the same.
The staff at *The Computer Paper* thank you
for your patronage, wish you much happiness
this season and continued success in the new year!

CANADA'S COMPUTER INFORMATION SOURCE
The COMPUTER PAPER
NEWS REVIEWS FEATURES

COMPUTER DIRECTORY

DOT MATRIX

PRINTHEAD

REPAIRS – SALES
EXCHANGES

Ph. (905) 508-1426 Fx: (905) 508-4182

TANSEN COMPANY LTD – CONCORD, ONTARIO

RENT • RENT • RENT • RENT

IBM COMPATIBLES, LAPTOPS & PRINTERS

RENTALS • WEEKLY • MONTHLY • YEARLY

FREE DELIVERY AVAILABLE

STUDENT DISCOUNTS ON RENTALS
AUTO SALES • SERVICE • LEASING • TRAINING

Best Prices In Town!

• PRINTERS • MONITORS • MODEMS • RIBBONS
• NETWORKING • ALL COMPUTER ACCESSORIES

MONDAY TO FRIDAY
11:00AM - 6:00PM
(905) 829-2155

Wonimation
OAKVILLE, ONTARIO

SOFTWARE DEVELOPERS - OEM'S

New Deadlines Are In Effect

If you are a Canadian incorporated private company undertaking product development or upgrades (complete or in progress) contact us for our FREE 18-page guide to receiving your federal/provincial RESEARCH & DEVELOPMENT GRANT MONIES

Iwasan Consulting & Associates
1-800-661-4463 (24 hours)

Novell's NetWare Training

- Certified NetWare Administrator 2 wk $499
- Certified NetWare Engineer 7 wk $1995

15% off until Dec 31 on above prices

Course material included
Full-Time 4 hrs/day 5 days/wk
Part-Time Evening & Weekend classes

LAN CIRCUIT
9011 Leslie St Suite 305 at Hwy 7
Tel (905) 709-3400 Fax (905) 709-3460

ELECTRONICS
J&S

SILVER STAR BLVD
FINCH
MIDLAND

TEL: (416) 297-5600
FAX (416) 297-5069

MONITOR REPAIR CENTRE

LOW RATES
FAST SERVICE

SALE, UPGRADE & SERVICE
SYSTEMS & ACCESSORIES

MON-FRI 9:00 AM-6:00 PM
SAT 10 AM- 3 PM
AFTER HOURS AND EMERGENCY SERVICE
CALL (905) 676-5402 (STAN)

J & S ELECTRONICS
200 SILVER STAR BLVD UNIT #208
SCARBOROUGH, ONTARIO M1V 4V7

Custom Software Specialists

Specializing in consulting services in:

- Business/Engineering Software
- Windows, DOS OOPS Applications
- Networking, Multi Platform Connectivity Applications
- Visual Basic, Access, Visual C/C++ Crystal Reports, SDK VBAssist, DataWidgets
- Clipper, 0&0

Electronic Business Solutions
Call Gord Dubey (416) 501-9722

CD-Multi Services

WHY COME TO US, WHEN
WE CAN COME TO YOU.
We will create your own Multimedia CD.

We also do
Networking, software, hardware installation, database and more.
For more info. call (416) 686-6684

Autosell X-Change

FREE 24hr
Interactive database BBS

USED CARS
NEW CARS
MOTORCYCLES
PARTS
RV'S

Low Cost Monthly
Advertisement Rates! (905) 279-1545 N81

Computer Freelancers
UNLIMITED INC.

One Call Does it All!

Just one call connects you with talented independent computer experts available to work for you on their computer or yours by the hour, the day or the project

In Toronto Call (416) 222-8221

5075 Yonge Street Suite 403 North York ON M2N 6C6

USED COMPUTERS

SAVE MONEY!

We buy & sell used brand-name PC computer equipment.
Call PC OUTLET 416-975-4500
BBS 416-972-6719
246 Dupont Street, Toronto M5R 1V7 (at Spadina)

Desktops Portables Printers

DATA RECOVERY

Canada's leading experts on file retrieval

Complete Facility for Hard Drives Diskettes and Removable Media

DOS • MAC • Novell • UNIX

Free evaluation. No files – No charge
Nationwide service – Highest success rate
Charges from $150

CALL TODAY FOR A FREE INFORMATION FAX PACKAGE

(416) 510-6990
1-800-563-1167

DATA RECOVERY LABS
Division of Data Recovery Services Inc.

CD PRODUCTION 416-535-7885

CD Production Premastering and one offs in all formats. Including CD-Audio, CD-ROM, XA, ISO9660, Mixed Mode

Imaging Scanning, Data Archiving, Catalogues, to CD-ROM, fully indexed and searchable

Replication. Production runs, Packaging, Labeling and Glass Mastering

Intervision Media Group

30

Ready-to-Use Standard Form Templates for Graphic Design Businesses, Advertising Agencies, Corporate Creative Departments and DTP Users in Corel Draw Format. Fully Editable with Room for Company Logos and Other Information.

Manual and Disk Introductory Price

$19.99

FANTOM ARTS COMMUNICATIONS INC

To Order Or To Find Out More [illegible]

[illegible]

Call
(416) 429-9898

LASER CHEQUES For *Quicken* & other Accounting software

- Standard business cheques also available.
- 40% less than the bank. • Shipped within 48 hours!
- Guaranteed lowest price! • Company logo included!

Security features on all our products!

Quick Cheques Inc.
63 Mallory Cres. Unit 3 Toronto, Ont. M4G 3L6
Tel: 416-425-6993 Fax: 416-425-6028
Toll Free: 1-800-361-5673

COMPUTER DIRECTORY

Make Your Computer Files a Printed Reality

GO 4 COLOR

Full Color High Quality Printing at the Lowest Possible Prices 500 Copies & Up

For Information Call: (416) 724-5507

Hello? BIGMOUTH Is Always There

Qualified Dealer Inquiries Welcome

Full Featured PC based Call Processing/Voice Mail That never lets you "down"

Canadian Distributor for Talking Technology Inc

Powerline II Cards, Complete Line of Voice Mail Products

NEW
Voice Window - open architecture, voice, fax, outdialing, dtmf/text file support, multi-line background operation under DOS or Windows 3.1 for every line communications.

Callect Communications Inc
209 40th Ave. N.E
Calgary Alberta T2E 2M8
Voice (403) 277 1140
Fax (403) 277 7914

Exceptional Service & Free Technical Support is our "platform"
For more information call today

Multimedia Authoring Software & Training

Multimedia ToolBook - Compel - MediaBlitz!

Natural Software

Authorized Asymetrix Multimedia Development - Software Training

905-468-0068

COMPUTER MAINTENANCE

CLEANING REPAIRS PREVENTATIVE MAINTENANCE

SPECIAL INTRODUCTORY OFFER — HALF PRICE PRINTER CLEANING WITH SYSTEM CLEANING

- SYSTEMS $45
- TERMINALS $22
- MATRIX $20
- LASER $30

PC CARE

SPECIAL REPAIR RATES WITH CLEANING CONTRACT

(416) 516-0061 REPAIR RATES FROM $35

CONTRACTS AVAILABLE

CLEANING: SYSTEMS, TERMINALS, PRINTERS, MONITORS, MOUSE, KEYBOARDS, DRIVES, CONTACTS, PCB, CARDS, PRINT HEAD, INTERNAL VACUUMING

ALSO: ANTI-STATIC TREATMENT, [illegible], MAINTENANCE, DIAGNOSTICS, TUNE-UPS

COMPUTER MONITORS

Laser Printer Service

FAST COMPUTER REPAIRS

IBM, Apple, NEC, Hewlett Packard, Okidata, Panasonic, Wyse, Compaq, Raven, Packard Bell, Epson

ADS *Advance Depot Service*

450 Alden Rd, Unit 5, Markham, Ontario L3R 5H4 • 905-479-9542

Rent our centre to teach your own computer classes! Or... Rent computers by the hour to finish your project!

We provide state of the art equipment in a clean and friendly environment at an affordable price!

- Power Macintosh 7100/66.
- 486 DX2/66 Intel base PC
- Scanner, Colour/BW Laser Printer up to 1,200 dpi.

Special rate for students!!

Hardware • Software • Printing • Desktop Publishing • Flyers and Bus Card • Chinese Fonts

Amigo Desktop Centre
130 Spadina Ave. Suite 40L (at Richmond St.)
(416) 504-3067 or 504-3068

DATA RECOVERY

DOS • Novell • Apple • UNIX • Windows

Hard Drives, Diskettes & Removeable Media
Class 100 Clean Room
Free Diagnosis & Estimates

CBL 1-800-551-3917
24 Hour Emergency Service

WE BUY & SELL
USED COMPUTERS

Buy + Sell • Trade In • Trade Up
Used Computers from $199 – IBM Compatible

Dominion Business Machines
100 Adelaide Street East
364-2978 Since 1902 364-0191

DA MULTIMEDIA STUDIO CD ROM & CD AUDIO PRODUCTION

600MB CD ROM or 74 Min. CD AUDIO Burning Services Available

COMPLETE IN HOUSE MULTIMEDIA PRODUCTION FACILITIES

Analog/Digital/MIDI Audio Recording Studio, [illegible] Video Editing Suite with AMIGA TOASTER & Single Frame Recording [illegible] Series Decks

MAC, IBM, AMIGA & ATARI PLATFORMS SUPPORTED

COMPETITIVE RATES

[illegible] WOODBRIDGE, ONT L4L 6C6
HWY 400 & HWY 7
TEL/FAX 905-[illegible]

SAVED CD SERVICE BUREAU

Roll your own CD-ROM or CD Audio masters for just $250!

We'll put up to 650MB of your data permanently onto a Mac or PC-format CD-ROM (additional charge for copying from removable media). Need more? Additional identical discs are $125/each. Call Naginder Manhas @ 975-6768 for more info. We do CD Audio too - call Ross Bell @ 928-6434 for more info.

SAVED BY TECHNOLOGY
10 [illegible] Street • Toronto • ON • M4Y 1[illegible]

PRESENTATION EDGE INC
Suite 200 138 Huron Street
Toronto Ontario M5T 2B2
593 3869 Fax 340 9309

DIRECT PC/WINDOWS OUTPUT

- 2400 dpi Paper and Film Imaging output direct from Windows
- Supporting CorelDraw, Quark XPress, PageMaker and all major Windows applications
- Canon Colour Laser Proofs with a Fiery Rip
- 4000 dpi Drum Scanner
- Fuji Colour PrePress Proofs
- Mac < = > PC Conversions

Cross Platform Experts! Send us your MAC and PC files!

AutoCAD BY CORRESPONDENCE

Student Edition AutoCAD available

AutoCAD 2D, 3D, Customizing and AutoLISP courses
AutoCAD Operator Certificate
Authorized Autodesk Training Centre

For a free brochure write or call

ACFY Department, SAIT
1301 16 Avenue NW
Calgary Alberta T2M 0L4

Phone: (403) 284-7202
Fax (403) 284-8012
BBS (403) 284-8012

SAIT Southern Alberta Institute of Technology

Index of Advertisers

Accounting	
NEBS / one-write PLUS	8
Books	
Computer & Book Centre	100
CPIC Technical Bookstore	103
Toronto Computer Media	106
CD-ROM	
CD-Multi Services	122
P.I.L. Multimedia	110
Desktop Publishing	
Amiga Desktop Centre	128
Fashion Arts	120
Scenetics	60
Events	
Lap&Palmtop 94	114
Gifts	
Chocolate Messenger	13
Silicon Jewelry	80
Hardware & Software	
1 Stop Computer Shop	84
180 Computer Warehouse	48
2000's Technologies	34
5A Computers	100
A plus Software	80
ABC Computers	86
Ability Plus	102
AC Systems	54
Access Business Centre	47
ADM Computer System Ltd.	36
ACT Computech	90
Adam Peripherals/Umax	19
Advanced Home Automation	100
Alpha Computer Connection	74
Alpha Plus Computers	104
AmPAG	14
Anchors Away Corp.	79
Anubis Computing Canada	108
Apis	124
Ashtaq Business	100
BCC Computers	60
BICMOS Trading Int.	104
Big Boss	84
BUS Business Ultimate Systems	90
Byte Info Systems	26
CS1 Computech Co. Ltd	32
Canadian Business Automation	70
CDH Systems	88
Cell-ect Communications Inc.	125
Claris Canada	18
CLT/Commercial Laser Technologi	31
Club Mac	92
Com Business Service Centre	118
Compaq PBM Systems	111
Computer Technologies	118
Compatible Plus	100
Complete Micro Solutions	2
Compumemories	73
Computer Liquidation Centre	112
Computer Tower	38
Computer World	58
Computer Id Plus	21
Connell Computer	22
Corel	3,128
Cory Computer Centre Ltd.	114
CPU Data Systems	130
CTC Computer Telenet	42
CTS Computer Company	42
Custom Software Specialists	130
Digital Equipment of Canada	16
Dominion Business Machines	102
DTB Computers	24
Elite Systems	90
Eurasam	28
Express Micro	89
Famous Funds	108
Fujitsu Canada	19
GC Systems	104
Genesis System House	32
GigaTrend	68
Global Drive Solutions	36
Grand Computer	106
Golden Pac	34
Hewlett Packard	18
Hi-Tech Services	67
HITS	126,127
HMT Computers	81
HVM Computer	86
IBM	13
IBM Dealers	12
IC Technology	32
ICCT Technologies	34
Impulse	11
Intel	6,7
Intervision Media Group	102
IPC	100
Jackie Bear's Software Direct	124
Kentron Computer Inc	108
Kilobytes Computers	80
KV Computers	62
Lan Circuit	122
Lance Computers	63
Logic Computer House	69
Lylyss Computer & Electronics	38
Markotron	79
Maxbyte	88
Maxtron	79
McClelland & Stewart	40
MBG	88
Media CD Shop	51
Memory Dataflex (Canada) Inc.	36
Micro Waves Canada	51
Micro-Chip Computers	88
Microsel	88
MicroGram	41
Microview	108
MIT Computer Supplies	90
Modus	88
Mt. Pacific Technol	81
MPM Industries	86
MPT Computers	88
Multimedia Effects	105
Munsell Systems & Designs	48
Natural Software	120
OA Computer	48
Odante Computer	31
Optimum Technologies Inc.	81
OTA Notebook Centre	45
Pacific Royal Enterprises	86
Parrots	88
PC Factory	77
PC Outlet	132
Plasma	10
Plustek Dealers	113
Prima Computer	28
Provincial Products Inc	111
Rainbow Computer	91
Rocket Computer Systems	91
Samwave	111
SBL System Builders Limited	127
Seana Technology	108
Signa Computer	40
Smart Modem	54
Soft Comp	54
Softec Business Computer	94
Sogo PC Factory	11
Stacker	37
Starlight Computer Software	118
STD Technology Inc.	4
Samwave Network	124
Sunix Inc	40
Syntelligence	111
The Document Co. Xerox	86,87
The Notebook Store	75
Thoma Computer Systems	88
Tiwa Computer Products	72
Torregi	66
Tri Computerized Systems Inc.	100
Total Computer Services	88
Tribus	108
Tison Electronics	90
TTI	76
Ultinet	9
Unicom Computer Corp.	85
Unitec Onelink	74
Vina Computer	84
Wonder	86
WordPerfect	38
World Business Systems	81
Youlo	88
YHC Cassette Industrial Ltd.	73
Zagros	63
Lottery	
Cornell Consulting	110
Smart Luck Software	112
Macintosh	
Applied Microsystems	61
Canadian Computer	81
Club Mac	92
CPUsed	88
Doctor Mac	92
Long & McQuade	81
Musicware Distributors	86
The 10th Street Computer	88
Networks	
Creative Technologies	14
On Board Systems	112
Online	
Autonet	122
C.C.N.A. International	88
ComputerLink	80
CRS Online	44
Frontier	88
Hookup	70
InfoRamp Inc	17
Interlog Internet	21
Internex Online	27
NSTN	108
Online Sports	96
Onramp Network Services	96
Programmers Guild	68
Rose Media	67
TGN Systems	68
The Connection BBS	124
The Wire	90
World Every Byte	96
Payroll	
Aston Microsystems	40
ComPay Computer	88
EASYPAY	99
Paymate/AK Microsystems	88
Printing	
Go 4 Color	123
Rental	
Compumemories	73
Westminster	100
Service & Consulting	
Abits	124
ACP Marketing	24
Advance Depot Service	123
CBL Technologies	109
Circa	124
Computer Freelancers Unlimited	122
D.A. Multimedia	103
Data Recovery	109
Electronic Business Solution	108
Electronic Circuit Repair & Te	124
Image Control Electronics	88
Iwasan Consulting and	122
J&E Electronics	103
Keith Kash	88
Kompu Kare	84
Internet Marketing Research	41
Norland Consulting	86
On-Site Services	124
O.P.M. Office Photocopy Machine	115
Optima	124
PC Care	123
Quickshouse Inc	132
Rescue!	79
Saved by Technology	129
ScanSource	124
Shelfshelf Canada	84
Taroom	122
Service Bureau	
Campus Systems	72
Copywell	97
Krishna Copy	58,64
Lino Depot	118
Presentation Edge	123,124
Tri-Tech	58
Shareware	
Marcam Computers Canada	80
Subscription	
TCP Subscription	105
Tax Software	
Cantax	86,87
HomeTax	25
Training	
Alaya Tech	116
CMS Training	118
Internet Learning Centre	118
Microsel	116
Object Arts	26
SAIT	123
SoftTrain Institute	118
Sunil MicroLab	111
The Institute for Computer Stud	88
The Learning Mart	118
User Friendly Organization	118

This listing is provided as a client service. *The Computer Paper* cannot be responsible for errors or omissions.

APiX Tel (416) 750-9909

AMIGA PRODUCTS

MRC PRODUCTS

ON-SITE SERVICES

ON-SITE PC, MAC, MONITORS & PRINTER (LASER) REPAIRS UPGRADES TO VIRTUALLY ALL BRANDS NEW & USED PARTS NETWORK & SOFTWARE SUPPORT SERVICE AGREEMENTS FONTS: PUNJABI, BANGALI, HINDI & GUJARTI

PCs Xpert Corporation Rates From $35

100 Westmore Dr. Unit 11C
Etobicoke, Ont. M9V 5C3
(416) 520-7102

ARE YOU TIRED OF PAYING OUTRAGEOUS PRICES FOR POPULAR SOFTWARE

YOU ARE NOT ALONE!
CALL 1-800-826-4412

JACKIE BEAR'S SOFTWARE DIRECT
Mon-Fri 9am-5pm Sat 10am-5pm
100's of titles Call for a FREE catalogue
Fax orders 403-464 3727 • VISA, MC

We speak bar code

- wands•laser scanners
- portable readers
- label printers
- label printing software
- magnetic stripe readers

Free delivery anywhere in Canada. Quality products. Low prices. Resellers welcome.

ScanSource Canada Ltd. 1-800-565-SCAN (7226) FAX 1-800-565-SCAN (7226)

---

* FREE * FREE * FREE * FREE *

9,900 SOFTWARE PROGRAMS

When you order "How to Make a Fortune With Your Computer"
Possible earnings of $150,000/year with your IBM PC
• • • PLUS • • •
How to obtain a new 486 Computer & Accessories
AT NO COST!!!

For FREE details send or fax your name & address to:

Bonus: How to Make $3,171+/Month With your Fax

ABBA Computer

VIDEO PROFESSOR $30 each

WP 6.0 DOS 6.0 WIN 3.1 LOTUS 1-2-3 WORD

31 Amber Street, No. 4, Markham, ON L3R 4Z3

The Connection BBS

Experience the Adventure!

News and Information
Downloading/Uploading
Shareware/GIFs
Meeting People
50 Chat Lines
Networking Around the World
Canada's Most Popular BBS
Making Friends Internet E Mail

Call (905) 882-8161 Outside Toronto (416) 229-9732

Electronics Circuit Repair & Technology Center

Specializing in Test and Repair of Boards Used in

Communications • Industrial
Control • Audio • Video • Fax

48 Hrs Turn Around
180 Days Warranty

An ISO 9001 Company

Tel:1-800-OP-AMP-IC (672-6742)
FAX:800-565-5 FAX
Offices in Canada, USA, Mexico

Your Files on CDROMs!

- We write up to 650 MB of your files/CD
- Readable on PC, MAC, UNIX, etc
- Save hard disk space
- From $79/CD
- Send your tape, floppies, HD etc

Circa Informatique

FREE!

9,900 SOFTWARE PROGRAMS!

When You Order *"How To Make A Fortune With Your Computer"*

Free Info-Box 41168 Ottawa Ont. K1G 5K9

AT LAST!
An INTERNET Seminar exclusively for Windows users!

PRESENTATION EDGE

PRESENTATION EDGE INC. is offering Windows users an informative **Introduction to the Internet** during December

This in-depth, jargon-free 2½ hour session includes

- an overview of what the Internet is and how it can benefit you
- how a Windows user may easily hook-up
- a "no techie needed" Internet for Windows handbook
- complete, reliable software to get you online right away
- some cool and productive things you can do on the net

UNIX

You could spend $40 to $60 on a technical manual about the Internet and study lots of arcane UNIX commands OR you could come to our friendly seminar and get going right away! Classes convenient to your schedule: early evenings and weekends. Downtown location. Call NOW for registration details! **(416) 599 3869**

Fast Delivery Anywhere in Canada

MULTIMEDIA EFFECTS (416) 502-0404

ORDER LINE

FAX (416) 502 1593

MON-FRI 10am-6:30pm
SAT 10am-6pm

COD

Proud member of COMPUTING INDUSTRY

PINNACLE MICRO — ONLY $3,995

NEW AVAILABLE !!!

Recordable CD-ROM Drive

The Pinnacle Micro RCD 1000 [illegible] affordable double speed recordable CD system which includes easy-to-use software for both Macintosh and Windows-based applications. The Recordable CD System gives you the power to easily master data, audio and mixed mode CDs over multiple recording sessions. Each compact disc can be then played on any standard CD-ROM player. In addition the RCD supports formats such as ISO-9660, HFS, CD-I, CD-DA, CD-ROM-XA and Photo CD. You can create your own CDs for low cost distribution, reliable backup or even master your own disks for mass duplication.

PINNACLE MICRO — $1,395 & UP

Optical Storage Systems

The Tahoe 230MB™, the Sierra 1.3GB™ and the Sierra 2.6GB™ provide fast, on-line access to mass amounts of data. These products are ideally suited for graphics, pre-press, imaging, digital audio/video, as well as [illegible] data intensive applications. [illegible] optical products can be used for primary and secondary storage [illegible] data archival. Each 3.5" removable cartridge holds 230 Megabytes of data and each 5.25" removable cartridge holds 1.3 Gigabytes of data. You can achieve unlimited expansion simply by purchasing additional disks. Pinnacle's high quality media has a shelf life of more than 30 years and conforms to the ISO/ANSI/ECMA standards for data transfer and [illegible] interchangeability.

PIONEER — CALL FOR $$$

330 GIGABYTES OF NEAR ON-LINE STORAGE

Introducing the DRJ 5004X [illegible] capacity CD-ROM Jukebox that's a world of the lowest cost per megabyte for any optical storage system. THINK BIG - with 330 gigabytes of near on-line storage in a sleek cabinet just 40" tall. Mix that with up to four of the world's fastest CD-ROM drives and you have high capacity and big 614Kb/sec transfer rates. THINK 500 CD-ROMs with five 100-disc modules in one unit. Add fast drives and robotics all controlled individually or in combination by standard SCSI 2 interfaces and you've really got something! THINK PIONEER - with a reputation for reliability and a long history of success in CD-ROM technology. Combine that with a great price, and you have a powerful optical jukebox for an astounding 2 cents per megabyte!

HEWLETT PACKARD — $10,595 & UP

HP DesignJet 650C Color Inkjet Plotter

The HP DesignJet 650C [illegible] for large format printing to engineers, architects and graphic designers. The HP DesignJet 650C allows designers who have always sent print files to service bureaus to print poster-sized output in-house faster and cheaper than ever before. The HP DesignJet 650C whips out final quality E-size colour drawings in about nine minutes. Features include: Fast throughput - delivers plots five to ten times faster than pen plotters. High resolution 300 dpi for color, 600 dpi addressable resolution for lines - produces high-quality plots with fine lines and color shading. LocalTalk and EtherTalk connection - allows plug-and-play installation of optional HP JetDirect network cards for LocalTalk or EtherTalk. This printer is ideal for users who need fast, affordable color plotting.

MICROTEK — ONLY $3,795

ScanMaker IIi

Microtek's most sophisticated color flatbed scanner ever is packed with a world of features to produce high-quality color scans with vibrant colors, superior detail and extra sharp clarity. 36-bit (68.7 billion colors), single-pass color scanning at resolutions up to 2400 x 2400 dpi through software. Microtek's exclusive OCR color calibration/correction technology, powerful custom scanning software and the full version of Adobe Photoshop 2.5

[illegible] — ONLY $389

VGA - To - TV Converter

[illegible] has the power to instantly send sharp colorful images onto any television directly from your computer. Measuring just 5 x 3 x 1 inches and weighing 8 ounces, [illegible] provides VGA-quality computer-to-video output in a portable package. Other features include: zero flicker tolerance, composite/S-VHS output, VGA throughput, frequency adjuster, brightness control and an NTSC/PAL switch.

NOVEX TECHNOLOGIES — ONLY $99

FM Stereo Board For Your PC

Introducing RadioActive. Now you can listen to your favourite radio station or news program while working on your computer. Get full control of an FM Stereo System right on your computer screen. An easy to use graphical interface provides easy control for all functions. It does not interface with other applications or slow down your PC.

SONY — $629 & UP

Sony's 15", 17", 20" Digital Multiscan Monitors

You spend more time looking into your [illegible] than any other part of your computer. Isn't it time you looked into a better one? Sony's 15", 17" and 20" digital [illegible]. Now you can get relief from the strain and [illegible] of focusing on poor [illegible] while working on your computer. Sony's affordable monitors with their non-glare flat screen Trinitron tubes, Energy Star compliance and three year warranties are the monitors a person can work at. No matter what the application (advertising, pre-press, CAD, desktop publishing, or multimedia) our advice [illegible] who wants a change of [illegible] "why not [illegible] the best when you want to [illegible] work?" [illegible]

TURTLE BEACH SYS. - SOUND

THE LEGEND CONTINUES . . .

MultiSound, the most award-winning sound card in the industry, has a new member in its family... MultiSound Monterey. Like MultiSound, Monterey provides CD-quality noise-free hard disk recording on any 386 or better machine while offering 32 voices of Turtle Beach quality MultiSound to your system.

PC MAGAZINE EDITORS' CHOICE

ONLY $499

MAXELL - CD-R MEDIA

CD-ROM Data Storage Solutions

- Safe, Permanent, Data Archiving
- Cost Effective Data Distribution
- Ideal for CD-ROM Audio Prototyping
- Reduced Data Storage and Retrieval Costs
- Perfect Microfilm/Microfiche Replacement

AS LOW AS 2 cents Per MB

250MB TAPES DC2120 ONLY $18.99

14,400/28,800BPS FAX/MODEMS

Connect to the Information Super Highway with HAYES and PRACTICAL PERIPHERALS!

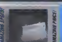
- 14,400 & 28,800bps Industry Standard FaxModems
- Hardware Error Correction & Data Compression
- 3 Years, Lifetime Worry-Free Warranties
- Prefered Brands by Fortune 1000 Companies

Practical Peripherals is a [illegible] Hayes [illegible] Products

PM144MTII

ONLY $169 ! ! !

TOSHIBA - QUAD SPIN CD-ROM



ONLY $499 ! ! !

Super Fast Quad Spin CD-ROM Drive

- 120 ms random access time
- 600 KB/sec Sustained Data Transfer Rate
- 256 KB Buffer, Embedded SCSI 2 Interface
- MPC2, Multi-session Supported

ACE - MULTIMEDIA MODEM

ACE THE ALL IN-ONE BOARD mwave

ONLY $349

The Upgradeable Multimedia Modem

It tells and takes messages. It delivers 16-bit digital sampling with state-of-the-art wave table synthesis. It has a CD-ROM interface. It sends and receives data at 57,600bps. It sends and receives faxes. Best of all, it won't become obsolete because it's DSP technology. ACE has been designed to be easily updated with simple software upgrades as industry advancements [illegible] like V.FAST, voice recognition, voice over data, video fusing, and more.

MEGAHERTZ - PCMCIA MODEMS

ONLY $279 ! ! !

14.4Kbps PCMCIA with XJACK

- 14,400bps send/receive data/fax up to 57,600bps
- Rugged XJACK connector pops out/in easily
- XJACK connecter eliminate bulky cables
- Auto installation software for easy installation
- Hot insertion and removing modem

Quantities may be limited, prices subject to change without notice

All CREATIVE LABS products on special for December only! Take Advantage! • FAX your order 24 hours a day to (416) 502-1593

HITS
COMPUTER & ELECTRONICS

THE POWER YOU NEED

INTRODUCING THE POWER
TO RUN WINDOWS® 4.0-THE CHICAGO

Pentium 90 Intel® CPU ATI Mach-64 Video

pentium processor

- Intel Pentium 90MHz CPU with Fan
- PCI Local Bus Main Board 256K Cache Expandable to 512K
- 16MB RAM, Expandable to 128MB
- Sony 1.44MB Floppy Drive
- 500MB Fast Hard Drive
- ATI Mach-64 PCI Local Bus Video Adapter with 2MB RAM
- 32-Bit PCI Local Bus IDE Drive Controller
- 15" Flat Screen 72Hz N.I. Monitor 1280x1024 & 0.28dp
- Medium Tower with 6 Drive Bays
- 2 Serial, 1 Parallel & 1 Game Port
- Daewoo 101 Enhanced Keyboard
- DOS-6 Installed with Manual & Disk
- Two (2) Years Parts & Labour Warranty
- FREE, CD Disk, 81 Excellent Games

Add 4xSpeed Teac CD-ROM Drive to This System for Only $399

$3499

Pentium 90 Intel® CPU

pentium processor

- Intel Pentium 90MHz CPU with Fan
- PCI Local Bus Main Board 256K Cache Expandable to 512K
- 8MB RAM, Expandable to 128MB
- Sony 1.44MB Floppy Drive
- 500MB Fast Hard Drive
- 32-Bit PCI Local Bus Video Adapter with 1MB RAM (Exp. to 2MB)
- 32-Bit PCI Local Bus IDE Drive Controller
- 15" Flat Screen 72Hz N.I. Monitor 1280x1024 & 0.28dp
- Medium Tower with 6 Drive Bays
- 2 Serial, 1 Parallel & 1 Game Port
- Daewoo 101 Enhanced Keyboard
- DOS-6 Installed with Manual & Disk
- Two (2) Years Parts & Labour Warranty
- FREE, CD Disk, 81 Excellent Games

Add 4xSpeed Teac CD-ROM Drive to This System for Only $399

$2899

Pentium 60 Intel® CPU

pentium processor

- Intel Pentium 60MHz CPU with Fan
- PCI Local Bus Main Board 256K Cache Expandable to 512K
- 8MB RAM, Expandable to 128MB
- Sony 1.44MB Floppy Drive
- 500MB Fast Hard Drive
- 32 Bit PCI Local Bus Video Adapter with 1MB RAM (Exp. to 2MB)
- 32-Bit PCI Local Bus IDE Drive Controller
- 14" SVGA Non-Interlaced Monitor 1024x768 & 0.28dp, 72Hz
- Medium Tower with 6 Drive Bays
- 2 Serial, 1 Parallel & 1 Game Port
- Daewoo 101 Enhanced Keyboard
- DOS 6 Installed with Manual & Disk
- Two (2) Years Parts & Labour Warranty
- FREE, CD Disk, 81 Excellent Games

Add 4xSpeed Teac CD-ROM Drive to This System for Only $399

$2299

Toronto

41[illegible] [illegible] Street
Tel: (416) [illegible]03 2283
Fax: (416) 603-0752

Richmond Hill

420 Highway 7 East
Tel: (905) 889-6518
Fax: (905) 889-3125

Port Colborne

633 Ma[illegible] West
Tel: (905) 835-2244
Fax: (905) 835-0237

Scarborough

[illegible] Ave.
Tel: (416) 754-[illegible]
Fax: (416) 754-8380

Mississauga

350 Matheson [illegible]
Tel: (905) 238-[illegible]
Fax: (905) 238-1586

North York

380[illegible] [illegible] York Ave.
Tel: (416) 499-2889
Fax: (416) 492-[illegible]

Downsview

2180 Steeles Ave. West
Tel: (905) 660-3280
Fax: (905) 660-4335

Prices have been cash discounted and subject to change without notice • All trademarks are the property of their owners • All pricing is already cash discounted

THE POWER OF Intel®

HITS COMPUTER & ELECTRONICS

486DX2-66 Intel® CPU 486DX4 Upgradable

- Intel 486DX2-66MHz CPU with Fan
- VESA Local Bus Main Board with 256K Cache
- 4MB RAM Expandable to 64MB
- Sony 1 44MB Floppy Drive
- 350MB Fast Hard Drive
- 32-Bit VESA Local Bus Video Adapter with 1MB RAM (Exp to 2MB)
- 32-Bit VESA Local Bus IDE Drive Controller
- 14' SVGA Non-Interlaced Monitor 1024x768 & 0 28dp
- Medium Tower with 6 Drive Bays
- 2 Serial, 1 Parallel & 1 Game Port
- Daewoo 101 Enhanced Keyboard
- DOS 6 Installed with Manual & Disk
- Two (2) Years Parts & Labour Warranty
- FREE CD Disk, 81 Excellent Games

Add Sound Blaster Discovery CD-16 MultiMedia Bundle for Only $339

$1699

486DX2-66 Intel® CPU

- Intel 486DX2 66MHz CPU with Fan
- VESA Local Bus Main Board 128K Cache Expandable to 256K
- 4MB RAM, Expandable to 64MB
- Sony 1 44MB Floppy Drive
- 350MB Fast Hard Drive
- SVGA Video Adapter with 512K 1024x768
- Super I/O Disk Controller
- 14" SVGA Monitor 1024x768
- Mini Tower with 220 Watt
- 2 Serial 1 Parallel & 1 Game Port
- Daewoo 101 Enhanced Keyboard
- DOS 6 Installed with Manual & Disk
- Two (2) Years Parts & Labour Warranty
- FREE CD Disk, 81 Excellent Games

Add Sound Blaster Discovery CD-16 MultiMedia Bundle for Only $339

$1379

486DX-33 Intel® CPU

- Intel 486DX 33MHz CPU
- VESA Local Bus Main Board 128K Cache Expandable to 256K
- 4MB RAM Expandable to 64MB
- Sony 1 44MB Floppy Drive
- 350MB Fast Hard Drive
- SVGA Video Adapter with 512K 1024x768
- Super I/O Disk Controller
- 14" SVGA Monitor 1024x768
- Mini Tower with 220 Watt
- 2 Serial, 1 Parallel & 1 Game Port
- Daewoo 101 Enhanced Keyboard
- DOS 6 Installed with Manual & Disk
- Two (2) Years Parts & Labour Warranty
- FREE CD Disk, 81 Excellent Games

Add Sound Blaster Discovery CD-16 MultiMedia Bundle for Only $339

$1239

Toronto

419 College Street
Tel. (416) 603-2283
Fax (416) 603-9732

Richmond Hill

420 Highway 7 East
Tel. (905) 889-6513
Fax (905) 889-3125

Port Colborne

633 [illegible] West
Tel. (905) 835-2244
Fax (905) 835-0239

Scarborough

[illegible] Blvd.
Tel. (416) 7[illegible]-8867
Fax (416) 754-8380

Mississauga

[illegible]
Tel. [illegible] 58 8781
Fax (905) 238-1586

North York

[illegible] Park Ave
Tel. (416) 499 2869
Fax (416) 492-4507

Downsview

2160 Steeles Ave. West
Tel. (905) 660-3281
Fax (905) 660-4536

Prices have been cash discounted and subject to change without notice • All trademarks are the property of their owners • All pricing is already cash discounted

CHRISTMAS MADE IN CANADA!

SONORA
BY SEANIX

Personal Computers

Quality product! Canadian made! Wait till Santa hears this
SONORA

X-Mas Special

MULTIMEDIA BUNDLE

SONORA 486DX2-66

- AMD Am486DX2™ 66MHz
- 128K External Cache
- 4MB RAM (Exp. to 64MB)
- 1.44MB Floppy Drive
- 420MB IDE Drive
- VESA local bus VGA Card (16.8M colors)
- 14" Green SVGA Monitor (.28mm) NI
- Double-speed CD-ROM drive
- 16-bit Sound Card, speakers
- MS-DOS™ & Windows™ for Workgroups
- Quality 2-button mouse w/pad
- Six (6) Microsoft™ CD titles
- 2 Year Warranty

$1,999.00

Other models also available.
486SX-33 loaded systems starting at $1,250

Includes FULL VERSION of these popular titles on CD!

MICROSOFT
ENCARTA
WORKS 3.0
MONEY
BEST OF ENTERTAINMENT PACK
GOLF
MUSICAL INSTRUMENTS

RETAIL VALUE: $350.

LR88608
NRTL/C

Please contact one of these authorized resellers

ACCEL COMPUTER
Peterborough, ON
(705) 74[illegible]

AVENUE COMPUTER CENTRE
Brantford, ON
(519) 753-5750

BWD SYSTEMS
Carleton Place, ON (613) [illegible]

COMPUTER NET
Belleville, ON
(613) 969-7717

D.E. SYSTEMS
Ottawa, ON (613) 723-[illegible]

HALNOR COMPUTERS
Simcoe, ON
(519) 426-5009

INLY SYSTEMS
Gloucester, ON (613) 744-8707

JMG COMPUSHOPPE
Hamilton, ON
(905) 575-3300

LAURENTIAN BUSINESS PRODUCTS
Sudbury, ON
(705) 674-3458

MICROAGE PEMBROKE
Pembroke, ON
(613) 735-2362

MICRO MARKET BUSINESS CENTRES
Kingston, ON
(613) 456-7370
Brockville, ON
(613) 342-2507

SEANIX

Unit 18 55 Administration Road
Concord ON L4K 4G9
Ph (905) 660-8829
Fax (905) 660-8840

IBM

- 486 SX-33 MHz Intel CPU
- 4MB RAM
- 212MB Hard Drive
- 1.44MB Floppy Drive
- 1MB VESA Local Bus Video Adapter
- IBM Mouse & Keyboard
- Preloaded with PC DOS & Windows
- One year on-site warranty

▲ **ValuePoint System** Monitor Extra

$1365

- 486 DX 33 MHz VL
- 4MB RAM
- 1.44MB Floppy Drive
- 170MB Hard Drive
- VESA Local Bus IDE I/O
- 1MB Video Adapter
- Black SVGA .28 Monitor
- Black Keyboard
- Preloaded w/ MS-DOS

▲ ***PCS 486DX Black Diamond***

$1699

- 486SLC2-66
- 4MB RAM
- 1.44MB Floppy Drive
- 260MB Hard Drive
- IDE I/O (2S/1P/1G)
- SVGA 512K Video Card
- SVGA 1024 x 768 Color Monitor
- 101-key Keyboard
- Preloaded w/ PC-DOS

▲ ***PCS 486 Budget Package***

$1099

Brother HJ-400

Desktop Ink Jet Printer

MONTHLY SPECIAL SALE PRICE

$289.00

- 12 Resident Fonts (Plus additional True Type™ compatible fonts)
- IBM® (Parallel) & Mac (RS-422A) Interfaces
- 360 x 360 dpi Resolution
- 110 cps (10cpi) Fine: 110 cps (10cpi)
- 2 Year Warranty

Brother HL-641

6 Page Per Minute Laser Printer

MONTHLY SPECIAL SALE PRICE

$589.00

- Free ClickBook™ Software ($69.95 value)
- 6 ppm Laser Printer
- 300 dpi Resolution
- HP LaserJet IIP, IBM ProPrinter XL and Epson FX 850 Emulations
- 2 Year Warranty

Cellular Phone Accessories Centre

KARAOKE MIXER	
[illegible] w/ 3 mic jacks [illegible]	$116.00
High quality mic golden	$40.00
BATTERIES FOR CELLULAR PHONES	
OKI 900, 900 mA, 10 hrs.	$30.00
Fujitsu Flip Phone 600 mA, 10 hrs	$30.00
Mitsubishi, 600 mA, 14 hrs	$30.00
PLUG-IN WITH CHARGER	
Motorola 8800	$24.95
Motorola 8500 Flip Phone	$24.95
Nokia 121/612	$24.95
Oki 900	$24.95
QUICK CHARGER WITH BATTERY CONDITION	
Motorola PT 550 (Flip Phone)	$75.00
Motorola 8800	$75.00
Fujitsu	$75.00
HANDS FREE KIT	
Motorola PT 550	$140.00

SALE

CD-ROM DRIVES

SONY CD 33A X2 speed < 320 ms	$179.99
PANASONIC 562/563 X2 speed <320 ms	$179.99
TOSHIBA XM 3401 X2 SCSI 2 <200ms	$399.99

Sound BLASTER CREATIVE

16 MULTI CD (OEM)	$139.99
16 SCSI 2	$239.99
SOUND GALAXY by Aztech Labs	$169.00

- 16-bit Stereo Sound Card with MITSUMI, PANASONIC & SONY Interfaces
- Free Headphones
- Free Multimedia & Business Audio Software

LOW $$ SOUNDTREK SOUND CARD with Built-in FM Transmitter & Speakers $59.99

EXTERNAL MASS STORAGE SCSI BOXES

(3.5")	$85.99
(5.25")	$95.99

- Ideal for external SCSI HD & CD ROM Drives, etc
- Superior quality and elegant design
- CSA approved 45W Power Supply

CD TITLES

MICROSOFT Encarta '95	$59.99
Compton's Encyclopedia 94	$34.99

KOSS

AMPLIFIED STEREO SPEAKERS

$19.99

NUMERIC KEYPAD

- Ideal for Notebooks
- 18 keys
- Beige or Black

$54.90

USRobotics

Sportster

US Robotics FaxModem 14 400 with v 42 bis

Internal	$149.99
External	$179.99

US Robotics FaxModem 28 800 High Speed

Internal	$319.99
External	$349.99

MOUSE

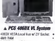
Microsoft Mouse Ver.2	$33.99
Logitech Mouseman Combo	$54.99
Z-Nix Serial Mouse	$9.50
DEXXA Serial Mouse	$15.99

HARD DISK DRIVES

260MB <14 ms IDE SEAGATE / FUJITSU WESTERN DIGITAL / CONNER	from	$229.99
420MB <13 ms IDE SEAGATE / CONNER	from	$299.99
560MB <12 ms IDE MAXTOR	from	$329.99
1.05G <9 ms, SCSI 256K Cache SEAGATE ST11200N	from	$849.99

HEWLETT PACKARD INKJET/LASER PRINTERS

HP 540 Inkjet Printer 3 ppm	$Call
HP 560C Inkjet Color Printer	$699.99
HP 4L Laser Printer 1M 4ppm	$919.00



DX-33 **$1299**

DX2-66 **$1365**

▲ ***PCS 486DX VL System***

- 486DX VESA Local Bus w/ ZIF Socket
- 4MB RAM
- 1.44MB Floppy Drive
- 340MB Hard Drive
- VL IDE I/O (2S/1P/1G)
- SVGA 1M Video Card
- SVGA 14" .28 dp Color Monitor
- 101-key Enhanced Keyboard
- Preloaded w/ MS-DOS

FREE

94 Compton's Encyclopedia

DX-33 **$1719**

DX2-66 **$1829**

▲ ***PCS 486DX Professional Multimedia CD***

- 486DX VESA Local Bus w/ ZIF Socket
- 4MB RAM
- 1.44MB Floppy Drive
- 540MB Hard Drive
- Dual Speed CD Rom
- Sound Card
- VL IDE I/O (2S/1P/1G)
- Built-in Speaker & Amplifier
- Mouse & 101 Keyboard
- SVGA .28 Monitor
- 1MB SVGA Video Adapter
- Preloaded w/ MS-DOS & Windows

90 MHz **$3399**

90 MHz **$3599**

▲ ***PCS 586 Pentium PCI System***

- INTEL Pentium CPU w/ ZIF Socket
- 8MB RAM
- 1.44MB Floppy Drive
- 540MB SCSI Hard Drive
- PCI SCSI Controller
- ATI Winboost 2M Video Adapter
- SVGA Monitor .28 NI
- 101 Keyboard
- Preloaded w/ MS-DOS
- Full Tower w/ 250W Power Supply

digital

▲ **DEC 1152**

DEC 1152 LASER PRINTER

- Postscript Level 2, HP PCL4 included
- 2MB Memory expandable to 4 MB
- 3 Active Ports w/ Auto Sensing, including Apple Talk
- 300 dpi enhanced at 4 pages per minute
- Canon Engine
- **ONE YEAR ON SITE WARRANTY**

$899.99

MITSUBISHI ELECTRONICS

◀ ***Power Windows***

Mitsubishi Diamond Scan 17FS
17" SVGA Color Monitor with
MATROX MGA VLB/2
Graphics Accelerator

$Call

Affordable CAD also available

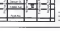
Mitsubishi Diamond Scan 20+
20" SVGA Color Monitor with
MATROX MGA VLB/2
Graphics Accelerator

$Call

3A

COMPUTER WAREHOUSE

1271 Denison Street
Unit 52, Markham
Ontario L3R 4B5
Tel: (905) 513-1811
Fax: (905) 513-0039



Business Hours:

Monday - Friday	9:00 AM to 7:00 PM
Saturday	10:00 AM to 5:00 PM

- **We specialize in repairs and upgrades.**
- **Cash & carry while quantities last.**
- **Leasing details available in store.**

CompuPartner

- PARTNER
- BUSINESS APPLICATIONS
- EDUCATION
- HOME ENTERTAINMENT
- FUTURE TECHNOLOGY & INVESTMENT

intel inside pentium

built by STD

Vancouver
Tel (604) 278-2893
Fax (604) 278 2801

Markham
Tel (905) 477-0388
Fax (905) 477 2881

Edmonton
Tel (403) 466-6800
Fax (403) 465-5355

Calgary
Tel (403) 250-9575
Fax (403) 252-0613

Ottawa
Tel (613) 736-7282
Fax (613) 736-7289

Regina
Tel (306) 761-2688
Fax (306) 761 1522

Montreal
Tel (514) 334-9340
Fax (514) 334-9350

Winnipeg
Tel (204) 488-7936
Fax (204) 488-7909

Quebec
Tel (418) 872-3482
Fax (418) 872-1988

Halifax
Tel (902) 468-3221
Fax (902) 468-1017

London
Tel (519) 680-3333
Fax (519) 680-2939

Hull
Tel (819) 778-7292
Fax (819) 778-7220

For information about our expanding team of authorized dealers call one of our regional offices
CompuPartner is proudly distributed by authorized dealers across Canada

COREL DRAW!™ 5

The Best in Graphics and Publishing

With the new lenses in CorelDRAW 5 users can create incredible photo-graphic effects such as transparency, magnify, grayscale, brighten, invert, heat maps, and more Dynamic special effects can also be created using morphing, artistic filters, and masking With 60 new additional fractal textures, CorelDRAW 5 allows for unlimited design variations

CorelDRAW 5 combines the graphics power of CorelDRAW and the advanced publishing capabilities of Corel VENTURA 5 within an integrated user interface. With a revolutionary colour management system, major performance gains and hundreds of improvements, CorelDRAW 5 retains the ease of use for which Corel is renowned. CorelDRAW 5 is the most exciting value-packed graphics and publishing software available.

Exciting New Filters

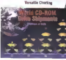
Amazing Morphing

INCLUDES
- CorelDRAW 5
- Corel VENTURA 5
- Corel PHOTO-PAINT 5
- CorelCHART 5
- CorelMOVE 5
- CorelSHOW 5

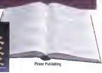
PLUS
- 825 fonts
- 22,000 clipart images & symbols
- 100 high-resolution photos

CorelDRAW 5—"the best has gotten better!"
InfoWorld August 1994-USA

"OUTSTANDING! CorelDRAW 5 really is the best graphics package ever!"



Versatile Charting



Power Publishing

FUTURE SHOP
DISCOUNT SUPERCENTERS
Visit the location nearest you!

CorelDRAW 5
$699.99*
CD-ROM Version
*799.99 CD-ROM + 3.5" disks

COREL
1-613-728-3733

Multi Christmas and a Media New Year!

Monitor may differ from picture

Microsoft Windows Ready to Run

yes NetWare Tested and Approved

Three Year Warranty IPC One Year On-Site

intel inside

30 DAY Moneyback* Guarantee!
*If you purchase any of the IPC CD/FX multimedia personal computers featured in this ad before December 31, 1994 and you're not completely satisfied, simply return it within 30 days for a full refund. See dealer for details.

With seven free software titles, a complete three year warranty, and an easy to use voice/fax/data modem, the CD/FX-66v is enough to make even Santa blush (and our competitors nervous)

But it doesn't stop there The whole series of CD/FX computers are jam packed with multimedia features that will add incredible realism to everything you do!

A dual spin CD ROM drive, a 16-bit stereo sound card, and a pair of amplified speakers will make even spreadsheets sing!

Plus every CD/FX system is ready to run right out of the box Plug in a few cables and start computing

And to top it off, if you aren't totally satisfied with your new IPC CD/FX computer, just bring it back and we'll refund your money

If you've been waiting for the perfect time to buy a new PC, this could be your lucky day Pick up the phone and dial **1-800-567-7413 ext 112** *or see the IPC CD/FX systems at one of the participating dealers listed below*

And add a little multimedia spirit to the season!

IPC CD/FX
Multimedia Series

IPC CD/FX-66v
- Intel 486DX2/66MHz processor
- VESA local bus
- 4MB RAM, 128k external cache
- 340MB high speed hard drive
- 3 5" high density floppy drive
- Double speed CD ROM drive
- Dual amplified speakers
- 16 bit stereo sound card
- 14 4 Voice/Fax/Modem
- 1MB VESA SVGA video card
- 14" SVGA monitor, 1024 x 768, .28dp
- MS Mouse and mouse pad
- MS DOS 6.22
- Windows for Workgroups 3 11

† Seven free Microsoft titles

$2,099

IPC 560-CD/FXv
- Intel Pentium 60MHz processor
- PCI local bus
- 8MB RAM, 256k cache
- 530MB hard drive
- 3 5" floppy drive
- Double speed CD ROM
- Dual amplified speakers
- 16-bit stereo sound card
- 14 4 Voice/Fax/Modem
- 1MB PCI video card
- 101 enhanced keyboard
- MS mouse and mouse pad
- MS DOS 6.22
- Windows for Workgroups 3 11
- Word 6.0, Word Assistant
- Bookshelf '94

$2,650

IPC CD/FX-50s
- Intel 486DX2/50MHz processor
- VESA local bus
- 4MB RAM, 128k cache
- 340MB hard drive
- 3 5" floppy drive
- Double speed CD ROM
- Dual amplified speakers
- 16-bit stereo sound card
- 1MB VESA video card
- 14" SVGA monitor, 1024 x 768, .28dp
- 101 enhanced keyboard
- MS mouse and mouse pad
- MS DOS 6 22
- Windows for Workgroups 3 11

† Seven free Microsoft titles

$1,799

FREE† SOFTWARE

Microsoft Encarta '95

Microsoft Golf [illegible]

Microsoft Works

Microsoft Dangerous Creatures

Microsoft Money

Microsoft [illegible]

Microsoft Entertainment Pack

IPC PERSONAL COMPUTERS

To see the new IPC CD/FX systems visit one of these participating dealers

Belleville	A & A Computers	[illegible]	[illegible]	[illegible]	[illegible]	Scarborough	[illegible] Computer	[illegible]
Burlington	Computer Odyssey	[illegible]	Lindsay	[illegible] Computer	[illegible]	St. Catharines	[illegible]	[illegible]
Cambridge	Cambridge Computer	[illegible]	London	CompuTrend	[illegible]	St. Catharines	St. Catharines [illegible]	[illegible]
[illegible]	[illegible] Computer [illegible]	[illegible]	[illegible]	[illegible] Technologies Inc.	[illegible]	Sudbury	[illegible]	[illegible]
[illegible]	C & B Computer Services	[illegible]	Mississauga	CompuTrend	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	North Bay	[illegible] Communications	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Computer Odyssey	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Computer [illegible]	[illegible]	[illegible]	[illegible] Systems	[illegible]	Whitby	[illegible]	[illegible]
[illegible]	Computer [illegible]	[illegible]	Peterborough	[illegible] Computer	[illegible]	Woodbridge	[illegible] Computer	[illegible]
Kingston	CompuTrend	[illegible]	Scarborough	CompuTrend	[illegible]	Woodstock	[illegible] Computer [illegible]	[illegible]

IPC Personal Computers are built in Canada by: 3D Microcomputers, 358 [illegible] Road West, Markham, Ontario L3R 1B3 Fax 905-479-7088

[illegible]